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The Effect of
Residency Requirements on
Police as Capable Guardians

A dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor of Philosophy
at Virginia Commonwealth University.

by

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Abstract

The debate over police residency requirements dates to the advent of the modern police force in the early 19th Century. Many reasons have been put forth regarding these requirements, from effectiveness to availability to economic impact. On the other hand, opponents have argued that quality of life, employee retention, and applicant pool should be considered in the decision to have residency mandates.

This study seeks to determine the effectiveness of resident police officers within the context of the Routine Activities Theory. In particular, it considered whether police officers are more capable guardians when they live in the jurisdictions where they work, specifically when using a marked take home police vehicle as a place keeper.

Data was collected regarding police residency, Group A crime, Group B crime, and social disorganization in 25 apartment complexes in Chesterfield County, VA, during a six month period. It was found that police residency had a statistically significant and moderately strong negative effect on the rate of Group A crime and signs of social disorganization, as measured by police calls for service. Police residency showed a weak negative effect on Group B crime, but it was not statistically significant.

Chapter I

Definition of the Issue

Introduction

Since the inception of the modern police agency in the 1820s, government administrators have struggled with the question of whether to require police officers to live within the jurisdiction in which they work (Miller, 1977). Through the early 20th Century, it was standard to require residency within the locality that employed the officer (O. Wilson, 1950). As the policing field professionalized and the study of it became an academic pursuit, questions arose about the legitimacy of such requirements (Carte & Carte, 1975).

There were a number of thoughts on the issue and the matter remained under controversy until the 1960s, when the police labor movement made the removal of such residency requirements a priority (Swank & Conser, 1983), often succeeding by the early 1980s when there was a resurgence of residency mandates (Gonzalez, Mehay, & Duffy-Deno, 1991; O'Brien 1997). During this time period, the criminal justice field as a whole was the subject of a fair number of studies conducted in the hope of improving the quality of law enforcement in the country following concerns about police conduct during the Civil Rights Movement (Kelling, 2003). Several of these studies evaluated police residency requirements and their effect on the quality of police applicant and officers available to police departments.

The rise of the community policing concept in the 1990s brought the question up again, however, due to the apparent disconnect between local police officers and the community they

served (American Civil Liberties Union (ACLU) of Southern California, 1994). Very few studies of the issue have been conducted in decades and there is a fresh need for discussion as to the impact of police residency policies on the effectiveness of police and their organizational culture.

On the one hand, many argue that modern law enforcement involves professionals who should be detached from the people they police (Neiderhoffer, 1967). Further, standardization of practices makes it unnecessary for police officers to be drawn from the community in which they live (Carte & Carte, 1975). Especially in urban areas, some say that police officers cannot afford to live within the localities that employ them (Coleman, 1983) and that allowing them to live in other places permits a better pool of people from which to hire (Bouza, 1978).

The opposite view is that officers who live in their community better understand its people and will be less prone to mistreat them (National Association for the Advancement of Colored People (NAACP), 1995). Additionally, they are more loyal to the community and its citizens (O. Wilson & McLaren, 1972). It is also thought that they are more responsive to the needs of the people who live there (Thibault, Lynch, & McBride, 2001).

Many political initiatives within the policing field occur due to issues that mitigate over time. In the middle of the 20th Century, public officials battling corruption were often willing to allow police to move out of their communities to reduce corruption that occurred when police officers became too close to the public or business. This was one of a number of actions taken or allowed during this time period to reduce direct non-official contact between police officers and the general citizenry (Fogelson, 1977).

Within several decades, however, it was found that this often resulted in police officers who were too removed from people to be concerned with their needs (Christopher Commission,

1991). In some cases, scholars posited that the police viewed themselves akin to an occupying army rather than a civil police force meant to help the community (J.Q. Wilson, 1968; ACLU, 1994). As a part of the overall community policing strategy, some communities began to encourage their officers to return to living in their jurisdictions (Thibault et al, 2001). Those governments that attempted to require this, however, were often met with serious resistance from police labor groups and legislative action (Gonzalez et al, 1991).

There has been little empirical research into the effect that police residency has on the interaction between the police and the community and none using Routine Activities Theory as the conceptual background. The goal of this paper is to study this issue and determine if there is any impact from such requirements.

History and Background of the Problem

When Sir Robert Peel founded the first modern police department in London in 1829, one of his goals was to introduce the concept of civil law enforcement into society (Hess & Wroblewski, 2006). Traditionally, the military had been in charge of policing urban areas and what scattered non-military law enforcement existed was poorly organized and hit-or-miss in its approach (Skolnick & Fyfe, 1993). Peel and his cohorts felt that an organized and cohesive arm of government, separate from the military, would result in a more just criminal justice system and would positively impact society as a whole (Hewitt, 1965). His police force would be made up of private citizens who lived among the community and his desire to implement this new style of policing was summarized in a statement that he repeated often to the new policemen and the community they served, “the police are the public and the public are the police” (Hess & Wroblewski, 2006)

Almost immediately, there were issues involving corruption and other misconduct. Many of the applicant pool were deemed morally unfit to serve with the Metropolitan Police, having lived in the city for their whole lives and become inured to the vices that Peel and the City fathers wished to combat (Hewitt, 1965). Peel, acting as police commissioner, began seeking recruits from the rural areas of Great Britain as a bulwark against corruption (Miller, 1977).

People within London were concerned, however, that these new police were not members of their community and did not respect their ways. Among a variety of reasons, this was a major purpose behind the Metropolitan Police requirement that all police constables live in the police district that they served in (Miller, 1977).

As the new concept of policing reached the United States, first in New York and later to other cities in the Eastern U.S., the format was adapted to meet the peculiar needs of the more localized American democracy (Kelling, 2003). Rather than allowing police recruits to be hired from outside of the city, the fledgling American departments instead required the applicants and officers to live within the actual political wards and be sponsored by the councilman for that ward before being hired (Miller, 1977; Lardner & Reppetto, 2000).

When political reforms began to alter the face of government, police practices also changed. Bureaucracies formed and power functions of police departments, such as plainclothes investigations and regulatory compliance, were moved away from precincts and became centralized functions (Kelling, 2003). This served to reduce the ability of ward bosses to influence and control their individual precinct commands. Nonetheless, the practice of requiring police officers to live within the jurisdictional boundaries was not changed and police theorists continued to argue that the local knowledge that came with the practice was essential to effective policing (Carte & Carte, 1975).

Little changed for decades until the police labor movement gained political clout in the mid-20th Century (Rhyne, Rhyne, & Elmendorf, 1977). Labor organizations argued against the practice, believing that it was a safety issue for officers living amongst those they arrested (Coleman, 1983) and that it limited the ability of public servants to find affordable and desirable housing (Rhyne, 1982). As police endorsement became more important for office-seekers following the rise in violent crime in the late 1960s, law enforcement organizations found a receptive audience for their concerns.

The 1990s saw a return to a more friendly-oriented style of policing, now referred to as community policing (J.M. Wilson, 2006). In spite of the push for line police officers to be more in touch with their communities, little scientific discussion occurred regarding the impact of police actually living within these communities. Programs grew up, however, providing low-interest loans for law enforcement to buy homes in less desirable neighborhoods, often on the assumption that the presence of police within the area would have a positive impact on police-community relations or the prevalence of crime and disorder issues (Thibault et al, 2001).

Today, much of the discussion of affordable or workforce housing that is en vogue involves police officers and other public servants. Many indicate that it is desirable to have police officers living within their jurisdictions. Regardless, there is still minimal empirical research to support or disprove the claim.

In 1979, Felson and Cohen set forth their Routine Activities Theory, a discussion of why crime occurs in particular locations (Clarke & Felson, 1993). They argued that crime occurred when there was a motivated offender, a suitable target, and the lack of a capable guardian (Felson, 1998). The theory initially revolved around predatory criminal activity, but in intervening years academic research expanded it to include a wider variety of crimes.

Additionally, while the original theory discounted discussion of police as capable guardians, later writings involved police through thoughts such as place keeping (where a potential target is made less amenable to criminal misconduct through the presence of human or physical impediments) and structural choice (which involves the motivated offender making a rational choice as to the capability of the guardian) (Taylor, 2004).

Police residency patterns are not discussed in the literature involving Routine Activities Theory, but would appear to be of some consequence. The presence of off-duty police officers, ostensibly a person responsible to the law at all times, within the community should have an effect on criminal activity. Further, visible evidence of their presence, such as marked take home police cars, should have an impact on their effectiveness as capable guardians to the community. Viewed from this paradigm, disagreement over police residency requirements is a discussion of whether residency makes a police officer a more effective guardian.

Operationalization

Statement of the Problem

Police administrators have struggled with the question of residency requirements for close to 200 years. Many issues impact the idea, but there is virtually no empirical research that has been done on the matter. Government and police administrators who desire to consider what to do about residency issues do so in a vacuum devoid of valid evidence as to what works best. Most such decisions are eventually made due to political clout or personal conjecture.

If police responsiveness to quality of life issues is indeed important, as community policing theory argues (Skogan, 1996), then residency should have some impact on the interaction

between the police and their individual community (Murphy & Worrall, 1999). A large number of police agencies have adopted the community policing format (J.M. Wilson, 2006). Most importantly, police residency and their off-duty presence within the community should enable them to be more capable guardians as defined by Routine Activities Theory, but such an assertion can only be made based on opinion.

Research Question

Does police residency impact the effectiveness in which police act as a capable guardian to the community under Routine Activities Theory?

Conceptual Assumptions

The study assumes that police officers who live within their jurisdiction are empowered to act as police officers while off-duty. The author is unaware of any state that does not permit law enforcement to act when not working, but is unable to research each individual local agency's policies regarding off-duty enforcement activity. Personal experience and literature review indicates that such restrictions are very rare.

Delineation of the Research Problem

The research question involves several variables. One is the rate of police residency. In those jurisdictions that require residency, this variable is simple. Many jurisdictions, however, have no such restriction and the rate will vary. Police residency is operationalized within the study by using the presence of take home marked police cars as visible evidence of the residency. Within

the theoretical view of Routine Activities Theory, the marked car at the officer's residence would serve as a place keeper that assists the officer in acting as a more capable guardian.

A second variable involves crime rates. These are fairly straightforward in nature and are measured by police departments as a matter of course.

Several control variables are necessary when considering crime rates in a community, specifically income levels (Tolan, 2004; Farrington, 2004), racial demographics (Petersilia, 2000; Bureau of Justice Statistics, 2005), and population density (Sampson, 2004). These are operationalized in the study through use of apartment complexes as the major area of study, rent levels, and reporting of census data for the area around the apartment complexes.

Hypotheses

Three hypotheses are set forth for research.

Hypothesis One

H₁: Jurisdictions with higher levels of police residency have lower rates of Group A crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The independent variable is the residency rate of police officers within apartment complexes.

The study uses apartment complexes to research the effectiveness of police residency within their jurisdiction of employment. Apartments are a suitable proxy for a city, town, or county because they have distinct, identifiable, and porous borders; people who are specifically responsible for the community (referring to elected/appointed officials and ownership/paid staff);

people who “belong” by virtue of living or working there; and outsiders of various sorts who visit and may belong depending on their reason for being there.

Dependent Variable

The National Incident Based Reporting System (NIBRS) Group A crime rate is selected as this rate measures the major crimes that are thought of when discussing criminal activity. It is a routine measurement for considering police effectiveness (Levitt, 2004), as well as whether a capable guardian existed (i.e. by definition, if such a crime occurred, then a capable guardian was not present). Smith’s 1976 study of St. Louis County police residency patterns, the only study that is somewhat similar to this study, included an examination of crimes rates and residency, specifically using Uniform Crime Report (UCR) Part I Offenses as a crime rate variable. UCR was a forerunner of the current crime rate reporting system.

The Group A offenses are listed in detail in the Definition of Terms section on page 26.

Control Variables

Income demographics are an important variable that affects reported criminal activity (Tolan, 2004; Farrington, 2004). The actual average income for just the selected apartment complexes are not available, so the average rent for a two-bedroom apartment is substituted. Most communities in which the housing costs are similar have residents whose incomes are similar.

Racial demographics are used as a control since minorities are victims of criminal activity more frequently than non-minorities (Bureau of Justice Statistics, 2005) and are arrested more frequently by police than non-minorities (Petersilia, 2000). This variable is regarded as affecting crime rate (Sampson, 2004).

Hypothesis Two

H₂: Jurisdictions with higher levels of police residency have lower rates of Group B crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The independent variable is the residency rate of police officers within apartment complexes.

The study uses apartment complexes to research the effectiveness of police residency within their jurisdiction of employment. Apartments are a suitable proxy for a city, town, or county because they have distinct, identifiable, and porous borders; people who are specifically responsible for the community (referring to elected/appointed officials and ownership/paid staff); people who “belong” by virtue of living or working there; and outsiders of various sorts who visit and may belong depending on their reason for being there.

Dependent Variable

The NIBRS Group B crime rate will be used as the dependent variable, as it provides greater insight with the type of crimes included. Group B is made up of more minor offenses sometimes associated with quality of life issues as discussed in broken windows theory (Kelling, 2003) or the community policing concept.

The Group B offenses are listed in detail in the Definition of Terms section on page 27.

Control Variables

Income demographics are an important variable that affects reported criminal activity (Tolan, 2004; Farrington, 2004). The actual average income for just the selected apartment complexes

are not available, so the average rent for a single apartment is substituted. Most communities in which the housing costs are similar have residents whose incomes are similar.

Racial demographics are used as a control since minorities are victims of criminal activity more frequently than non-minorities (Bureau of Justice Statistics, 2005) and are arrested more frequently by police than non-minorities (Petersilia, 2000). This variable is regarded as affecting crime rate (Sampson, 2004).

Hypothesis Three

H₃: Jurisdictions with higher levels of police residency have lower levels of social disorganization, as measured by calls for police service, than those with lower levels of residency, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The independent variable is the residency rate of police officers within apartment complexes.

The study uses apartment complexes to research the effectiveness of police residency within their jurisdiction of employment. Apartments are a suitable proxy for a city, town, or county because they have distinct, identifiable, and porous borders; people who are specifically responsible for the community (referring to elected/appointed officials and ownership/paid staff); people who “belong” by virtue of living or working there; and outsiders of various sorts who visit and may belong depending on their reason for being there.

Dependent Variable

Volume of police calls is a suitable proxy for social disorganization levels used previously by other researchers (Bursik, 1998; Warner & Pierce, 1993), as it measures the necessity of police

response to solve problems. These problems may vary from outright crime to non-criminal nuisance issues. Many police calls, unmeasured elsewhere in the criminal justice system, are a direct result of a neighborhood's inability to interact in a socially acceptable way (i.e. one call for loud music may be a fluke, but repeated calls for loud music within a complex are indicative of an abnormal social pattern). Certain types of police service calls, such as alarm activations, would not be included, as they do not measure social disorganization.

Control Variables

Income demographics are an important variable that affects reported criminal activity (Tolan, 2004; Farrington, 2004). The actual average income for just the selected apartment complexes are not available, so the average rent for a single apartment is substituted. Most communities in which the housing costs are similar have residents whose incomes are similar.

Racial demographics are used as a control since minorities are victims of criminal activity more frequently than non-minorities (Bureau of Justice Statistics, 2005) and are arrested more frequently by police than non-minorities (Petersilia, 2000). This variable is regarded as affecting crime rate (Sampson, 2004).

Importance of the Study

This issue has been discussed for many years, literally from the inception of modern policing. No real resolution has occurred and there has been a minimum of empirical research. An answer is desirable.

In recent years, this issue has been the subject of court or legislative dispute in Virginia (Nolan, 2006; Commonwealth of Virginia, 1997), New York (Richter, 2007), Wisconsin

(Schuldt, 2001), Illinois (Wilds, 2007), West Virginia (Chambers, 2007), Pennsylvania (Barnes, 2005), Louisiana (Johnson, 2006), Missouri (State of Missouri, 2003), and Ohio (Gomez, 2009). Discussion of the subject is very contentious and a source of frustration for most of those involved.

Governments have spent a great deal of time, effort, and money retooling their police agencies to emphasize community policing concepts (Hess & Wroblewski, 2004). However laudable the goal appears, it is possible that it may be hamstrung by a lack of residency by line police officials. If having law enforcers live within the communities they police results in a more effective police force, then the community policing model would be enhanced by encouraging higher incidence of residency.

On the other hand, if residency has no real effect on such issues, then residency requirements are a deterrent to recruitment and morale. Further, money spent by governments and community leaders to encourage residency within higher crime areas are wasteful. The resources could be better used elsewhere.

Definition of Terms

Continuous residency – Refers to residency requirements that apply to police officers after they are employed (Rhyne, 1982).

Durational residency – Refers to residency requirements that apply to police applicants prior to consideration for hiring (Black's, 1999).

Group A Offenses – Crimes that are generally considered to be major in nature. They are: Arson, Assault, Bribery, Burglary/Breaking and Entering, Counterfeiting/Forgery, Vandalism, Drug Offenses, Embezzlement, Extortion, Fraud, Gambling, Homicide, Abduction, Larceny,

Motor Vehicle Theft, Pornography/Obscenity, Prostitution, Robbery, Forcible Sex Offenses, Nonforcible Sex Offenses, Stolen Property Offenses, and Weapons Violations.

Group B Offenses – Crimes that are generally considered minor in nature; those crimes that are not Group A offenses. They are: Bad Checks, Curfew/Loitering/Vagrancy Violations, DUI, Nonviolent Family Offenses, Liquor Law Violations, Peeping Tom, Runaway, Trespassing, and all other crimes not enumerated.

National Incident Based Reporting System (NIBRS) – The method by which police agencies and state governments report their incidence of reported crime to the federal government. Typically, when a locality reports what their violent crime rate is, they are referring to the number of police reports that were written on a specific set of criminal classifications. NIBRS replaced the Uniform Crime Report in 1999.

Police officer – a person employed by a local or regional government agency primarily for prevention, detection, or investigation of crime and the apprehension of criminals. A police officer has the power of arrest. The term does not include other criminal justice professionals, such as corrections, process service, or bailiff.

Residency – indicates that the officer involved has their primary domicile within the jurisdiction or area being discussed.

Uniform Crime Report (UCR) – The method by which police agencies reported their incidence of reported crime to the federal government prior to the advent of the more descriptive NIBRS. The UCR was started in 1930.

Scope and Delimitation of the Study

The study is unable to ascertain a wide variety of issues that could impact of effectiveness of residency requirements. For instance, some police officers are better at their job than others, perhaps because they are more observant or diligent. The study is not able to measure the effect that a more efficient police officer may have within their neighborhood. Similarly, an officer with a poor reputation may have a different effect on a specific area. The study is intended to measure large-scale, generalized effects of jurisdiction wide residency patterns.

Further, the dissertation does not measure the impact of residency patterns in surrounding jurisdictions. It does not measure the incidence of police from other localities who may be living within the borders of a particular jurisdiction or the effect thereof.

In determining crime rates, it is not possible to measure the incidence of crime that is not reported to police within that jurisdiction. While the National Criminal Victimization Survey is intended to catch criminal activity that goes otherwise unreported and to measure any difference between the true crime rate and the NIBRS rate, the survey measures at the state and national level and is not broken down by locality. The results are aggregate.

When discussing issues of public trust and safety, these measurements are restricted to the results of surveys conducted within the particular jurisdiction. All of the limitations inherent in those surveys are assumed.

Conclusion

Residency requirements remain a very controversial issue, even almost two centuries after the original police forces were formed in London. Considerable discussion has occurred, but minimal effective empirical research has been accomplished in this area. With the advent of

community policing and the recognition of the great importance of police-community interaction that has occurred in recent times, research into the effect of residency on organizational culture and effectiveness is a valid and important field of study. In the following chapter, a more thorough literature review will be conducted and the information gathered will be used to inform the issue under consideration.

Chapter II

Literature Review

Historical and General Background

In the late 1820s, leaders in Metropolitan London determined that a better method of policing was needed (Hewitt, 1965). Facilitated by Sir Robert Peel, modern policing came into existence. An important aspect of Peel's model was that the police would be a part of the general citizenry and that the primary responsibility for suppression of crime would be on the populace themselves (Hess & Wroblewski, 2004). As Peel stated, "The public are the police and the police are the public."

Almost immediately, there was debate as to how best to implement this model. Some believed that police should be hired from within the city of London, while others felt that hiring from outside the city would reduce corruption, including Peel himself (Miller, 1977). No one, however, held the belief that once hired, the police constables should be permitted to live anywhere but within the city.

The transition of the British police model to the United States was made more difficult by the nature of American politics and by the rivalry between New York City and London (Kelling, 2003; Carte & Carte, 1975). While Peel's views on civil law enforcement have been borne out by time, the British model had detractors in the United Kingdom itself. The arguments against it, which included beliefs about corruption, skill, and the dilution of state power, were magnified in

some ways by the generalized American mistrust of centralized and permanent government authority (Miller, 1977).

In London, the reformers found a more willing audience for their new system (Hewitt, 1965). In one fashion, the public in Britain was more familiar with the presence of uniformed personnel within their midst and also the presence of strong centralized authority (Skolnick & Fyfe, 1993). Even today, British police have far greater latitude in their tactics than American police.

A second manner in which the British were more amenable was the onset of the industrial revolution (Ashton, 1997) and democratization (Huch, 2002). Whereas civil law enforcement came about over a half-century following the democratization of the United States, Peel's model was put into place as democracy was growing within the monarchy. With the arrival of the industrial revolution, cities were becoming more populated and densely inhabited. Throughout history, policing has required more personnel, more organization, and more actual intervention when people are in closer proximity to one another. Urban cores have always had a greater number of law enforcement officers per capita than less densely populated regions. With the growth of industrialized cities, something more than disorganized watchmen or the army was needed to maintain order and deal with internal criminal behavior (Hewitt, 1965).

The third way in which Britain was more ready for Peel's reforms was that it was simultaneous with industrialization and the order that was necessary for the industrial class to function year round. It is not a coincidence that the modern Christmas celebration and discouragement of the practice of wassailing came into being during the same time period as the London Metropolitan Police (Lalumia, 2001).

The industrial revolution lagged somewhat in the United States, however, so the call from the middle class was not as great. Further, Americans were less accepting of the standing presence

of uniformed government personnel in their midst (Miller, 1977). The Third Amendment, for example, made it more likely that soldiers within populated areas would be posted someplace centralized rather than dispersed within the population.

Eventually, however, New York's desire to equal its long-term rival for world-class status led to the creation of a police force in the 1830s along Peelian lines. It met with widespread derision, failed, and was disbanded (Miller, 1977). It was not until a decade later that New York established a lasting police agency, once the city was further along on the industrial scale (Lardner & Reppetto, 2000).

Whereas the London Metropolitan Police was an arm of the Home Ministry and therefore centralized in authority, New York's police department had a weak central authority in keeping with the American democratic model (Kelling, 2003). As a whole, the precinct commanders wielded great power to act independently of the rest of the department. These precinct captains were appointed by and answered to the ward bosses (Miller, 1977).

This is where residency issues became important in how the two agencies formed their organizational culture. While other reformers had argued with him, Peel had won out on recruitment and hired many of his constables from outside of London. They were beholden to the police service (Miller, 1977). In New York, though, applicants were required to have lived within the ward in which they wished to work for several years prior to appointment (Kelling, 2003). The precinct commanders hired their own people and essentially the job of police officer was an adjunct of the ward boss (Carte & Carte, 1975; Levenson, 1976).

In the 1920s, reform efforts concentrated on cleaning up government and eventually this also extended to the police service (O. Wilson, 1950). Increases in hiring qualifications and educational initiatives attempted to provide a better quality of police officer (Carte & Carte,

1975). Among the reforms initiated in major cities was the centralization of authority and bureaucracy (Kelling, 2003). Control over both investigations and hiring decisions were generally moved away from precinct commanders, removing much of the influence of ward bosses over the local police departments (Levenson, 1976).

During this time period, August Vollmer, then the chief of police in Berkeley, California, convinced the University of California at Berkeley to institute a police sciences study program, the first of its kind (Vollmer, 1936). Vollmer was a well-regarded police officer who served as an early leader in the International Association of Chiefs of Police (IACP) in the hopes of spreading professionalism within the craft (Carte & Carte, 1975).

Vollmer is of some importance to the discussion, as some scholars refer to him as the father of professional American policing and his work to provide a better class of police service resulted in significant reforms and less corrupt policework (O. Wilson & McLaren, 1977). Although none of his writings indicate a preference as to residency requirements, Vollmer's protégé, O.W. Wilson (1952), has written that they existed in Berkeley under Vollmer. Wilson, a prolific police science writer, indicated in all four editions of his landmark *Police Administration* (1950, 1963; with McLaren, 1972, 1977) that police departments should not limit who they hire by residency (i.e. durational residency requirements), but should require continuous residency within the jurisdiction for all police officers. He indicated that living in the community would improve relations between police and citizens, as well as increasing the officer's understanding of the area and its people.

Later, major reform efforts within American policing occurred during the 1960s. The Johnson administration, as part of its Great Society programs, studied a wide swath of governmental duties, including policing practices (Kelling, 2003). Concurrent with this time

period, police unions became stronger and began to assert themselves in seeking better lifestyles for those they represented (Rhyne et al, 1977; Levenson, 1976).

A presidential commission reviewed the ideas surrounding police residency requirements as part of a broader review of police hiring practices, concluding that residency mandates should be abolished nationally to promote hiring, but providing no empirical study of the issue (US President's Commission of Law Enforcement and Administration of Justice, 1967). The National Institute of Justice (NIJ) (2005) still recommends that police agencies consider relaxing residency mandates to improve applicant pools.

Of some interest was another study that was published in 1974, popularly referred to as the *Indianapolis Car Study* (Pfefferkorn & Bruckheim). This research involved productivity and operational issues, but included a discussion of allowing officers to take home their police cars and concluded that take home cars programs were more efficient and effective than fleet or pool car programs. Today, the IACP (2007) maintains that among the benefits of take home car programs are the improved sense of security felt by citizens, as well as increased enforcement that is conducted by off-duty officers.

In this vein, a number of studies indicated that take home police cars are more cost effective than pool fleets (Zhang & Benson, 1997; Mann & Goodman, 2004; Lauria, 2007). These studies and others found that officer morale is improved by permitting police officers to take their cars home (Schmechel, 2004). Further, the research done by Mann & Goodman (2004) and Lauria (2007), both regarding Tacoma, Washington, indicated a common belief among both citizens and police that take home vehicles deter criminal activity.

Concurrent with the original Indianapolis study, however, police unions were pushing to relax or end residency requirements (St Louis University School of Law, 1973). In some cases, they

sued in court. These were unsuccessful, with the U.S. Supreme Court ultimately ruling that residency requirements were lawful in *McCarthy v. Philadelphia Civil Service Commission* (1976).

As they failed in the judicial arena, the unions were more successful in the political field (Leonard & More, 1974). Legislative action in some states and cities removed residency requirements during the 1970s (Smith, 1980). Beyond this, police unions became an important endorsement for local elected officials and many cities and counties dropped their requirements at the behest of their elected bodies (Mehay & Seiden, 1986).

With the exception of a few studies in the 1990s, the issue seems to have dropped out of the picture academically. Nonetheless, there are frequent discussions of the issue in police-oriented magazines and trade papers. In most of these reports, the number of officers living outside a particular jurisdiction is usually lamented. In some cases, police administrators say that the people living away from work could slow emergency response. Others indicate that it is a bad thing, but give no real reason for believing so. Normally, they argue that officers are not paid enough to afford decent housing within the jurisdiction. Interestingly, some police unions now use the number of officers living out of jurisdiction in requests for pay hikes, ostensibly so that the officers could afford the mortgages on an average home (American Police Beat, 2007).

Previous studies

There has been a relative paucity of empirical research on the issue of police residency requirement, which has lead academics to express frustration when discussing the matter (Coleman, 1983; Mehay & Seiden, 1986; Gonzalez et al, 1991). Some of the studies discuss public perception or the effectiveness of police residency, others are more economic in nature. A

few were investigatory and attempted to determine why officers are opposed or for residency requirements.

Many of the arguments made for residency of police are economic and involve other government employees, as well (Rhyne et al, 1977). Frequently, city administrators desire their employees to live within the community to strengthen the presence of the middle class (Spielman, 2010; Sullivan, 2010). Police, firefighters, and teachers are often mentioned in this regard. Other administrators discuss taxation issues and the thought that the money paid to employees in salary simply leaves the jurisdiction (Hirsh & Rufalo, 1985).

Coleman (1983) studied a mid-size police department (85 officers) in a smaller city (40,000). Through interviews, he determined that most officers chose to live within the city although no requirement existed. Many of the officers interviewed stated that a certain laxity sometimes occurred in enforcement activities because it was likely that they or another officer knew the subject they were dealing with, with one administrator referring to it as favoritism. Officers who lived outside the community discussed the freedom that they felt when arresting citizens or summoning them, knowing that they wouldn't have social interaction with them during off-duty hours. In like fashion, Smith and Visser (1981) found that Washington, D.C. officers were twice as likely to make arrests if they lived outside the District than if they lived within.

Many officers living in the community in the Coleman study (1983) indicated a concern for the safety of their families and property, since people knew where they lived. Multiple officers, however, said that those who lived in the community were more interested in its welfare, were more cognizant of their reputations, and treated citizens better because they lived there.

Murphy and Worrall (1999) used secondary data to examine public perception of police agencies in consideration of residency requirements. Utilizing the 1993 Law Enforcement

Management and Administrative Statistics survey to determine residency requirements, the writers then merged this data set with the 1995 National Crime Poll to run a logistic regression. They determined that citizens in jurisdictions that had residency requirements generally had a lesser level of confidence in their police than citizens in localities without such requirements. Of some concern is that Murphy and Worrall's method of combining the data sets resulted in only one-third of the responses actually being compared and then, only one or two respondents to the National Crime Poll matched up with each city being discussed. Further, no discussion of residency was involved in the second poll, which resulted in no measurement as to whether the respondents had any knowledge of the residency status of their city or whether this had any bearing on their viewpoint.

This study came to the opposite conclusion as research by Carte (1973), who surveyed citizens of Alameda, California. He determined that a plurality supported residency requirements and felt safer as a result of them.

The American Civil Liberties Union (ACLU) of Southern California (1994), in a study conducted directly in response to the Rodney King beating and subsequent Los Angeles riots, determined that slightly more than 83% of the Los Angeles Police Department (LAPD) lived outside the city borders. In some cases, LAPD officers living in suburban cities outnumbered the police department actually working those jurisdictions, including in Simi Valley, where the four officers charged in the King incident were tried and acquitted on state charges.

Of those officers living within the city, it was found that most lived in areas that were not demographically representative of the city (ACLU of Southern California, 1994). The ACLU recommended that incentives be available to increase officer residency within the city and that such residency be encouraged to build trust between the community and its police. While the

study does not particularly tie the residency patterns to the difficulties that occurred in Los Angeles during the 1990s, it does discuss numerous allegations of an organizational culture that considered itself an occupying army holding ground in the city, similar to J.Q. Wilson's (1968) concerns following the 1965 Watts riot. Of note as to the validity of the ACLU's findings is that the official government review of the LAPD that followed the King beating found that the city's police force was very isolated from the community, specifically holding a siege mentality, and did not seem to be concerned with breaking down barriers between them (Christopher Commission, 1991).

Levenson (1976) conducted a case study in Detroit regarding the police union's eight-year fight against a newly enacted residency requirement. The research centered on unions and how they formed and obtained their goals, but the thesis included significant background on the history of residency requirements and the political influence of various groups in supporting or opposing them.

An economic and political analysis of municipal residency requirements conducted by Mehay and Seiden (1986) concluded that jurisdictions that employed such requirements had higher employee productivity (e.g. lower cost per unit), but that they also had higher budgetary expenditures because public employee groups tend to be influential within the political community and these groups tended to support increased budgets for their workplace. The study discussed police and fire employees specifically, and indicated that employees in jurisdictions with residency requirements were paid lower wages. They concluded that the budgetary gains accrued to the bureaucracy in general and did not help the employees of the organization.

Hirsh and Rufalo (1985) indicated that residency requirements had the effect of reducing wages for police, although localities that were considered low-wage employers were less likely

to have these requirements in place. On the other hand, Gonzalez, Mehay, and Duffy-Deno (1991) determined that there was no link between residency requirements and police wage levels. Within this same article, however, Gonzalez et al used a regression model to find that employment is higher and that police outcome (financial cost per unit) is more effective in those jurisdictions with residency requirements in place. O'Brien (1997) similarly finds no correlation between residency laws and wages or employment levels, theorizing that non-compliance and inconsistent application have a deleterious effect on outcome.

A study involving St. Louis County, Missouri, by Smith (1980) discussed the effect of residency on crime, clearance rates, and perception. The county, home to the city of St. Louis and 28 other municipalities, had countywide residency mandates (i.e. an officer could live in any locality, but only within the county itself). Smith concluded that there was a minor link between crime rates and residency and that those jurisdictions that had the most officers living in them had higher clearance rates and higher perceptions of police than those with fewer officers in residence.

As previously mentioned, the Tacoma, Washington study involved research on officer morale, cost effectiveness, citizen perception, and crime rates (Mann & Goodman, 2004). They did a cost benefit analysis in 1997 to determine whether the Tacoma Police Department should adopt a take home car system (referred to as an assigned vehicle program in the study). Surveys indicated that citizens believed that taking the police cars home had a deterrent effect on crime. Additionally, it was found that police officers performed more work when off-duty while driving to and from their residence and that their morale improved when they had individually assigned cars, as compared to having to check out a car and load it with their gear each day. Mann and Goodman also determined that take home cars lasted longer than fleet vehicles and were less

costly to maintain. Using an economic model, they estimated that Tacoma would experience a 3.1 percent drop in nonviolent property crimes if the city adopted a take home car program. Of some note is that this study also included police officers who lived outside of the subject jurisdiction and involved the effect of officers driving to and from work.

Theoretical Discussion

Police Residency

The matter of police residency has been discussed since the very formation of the modern police force. Many police associations and administrative texts review the issue, although references to the practice in police texts drops significantly in books published after 1980 or so.

In all four editions of *Police Administration*, Wilson (1950, 1963) or Wilson and McLaren (1972, 1977) indicate that pre-employment residency requirements restrict the ability of police departments to find qualified applicants. He strongly advocates, however, for post-employment residency, indicating that it is necessary for the officer to interact with the community, to understand its needs, and to feel compelled to protect it.

O. Wilson (1952) also found that residency requirements were commonplace, but fairly arbitrary in their placement. In arguing against pre-employment residency, he stated that police departments were dependent on the quality of applicant they attracted to be successful but that post-employment residency was a necessity for a strong police department. He did, however, make an exception in cases in which there was no suitable or affordable housing available for the officer to live in (O. Wilson, 1950).

Chase (1979) discussed residency issues in an occupational publication, interviewing a number of officers who indicated that living within the community resulted in having a stake in the effectiveness in the police department. Other officers indicated concern for the safeties of their families when living in their jurisdictions.

Bouza (1978), at the time the deputy chief of the New York City Transit Police, formerly an assistant chief for the New York Police Department, and later the chief of police for Minneapolis, referred to residency requirements as “narrow, self-defeating, and short-sighted” and centered on urban hostility towards suburbanites holding city jobs. He listed five reasons that they were a poor policy choice:

- The suburbanites contribution to the economic and cultural richness of the city.
- The public servant's needs to broaden the recruitment base to attract the best available candidates.
- The exercise of an employee's freedom of choice of residence.
- The patent unworkability of prior residency laws and the frequent need to rescind them because they were unenforced and unenforceable.
- The frequent unavailability of suitable housing (within the employee's price range) inside the city's limits. This necessarily implies that the city has a responsibility for insuring the availability of adequate housing before imposing residency requirements.

Swank and Conser (1983) wrote that residency requirements have a great deal of effect on recruitment and longevity within a police department. They argue that residency requirements

reduce the availability of qualified applicants and causes morale problems, citing an abnormal number of police resignations following imposition of such a requirement in Cincinnati in 1979. Going on, they write that requirements are generally issued in the belief that they improve response time to off-duty emergency callbacks, that police are more concerned about their locality if they live there, residency improves relations between police and the community, and that it makes the officer more committed to community service.

In addition to these, Mandish and Frankel (1976) indicate that residency requirements improve the tax base and that off-duty officers are more likely to intervene in response to criminal acts. Mehay and Seiden (1986) also put forth that residency requirements reduce city unemployment rates and “restore fiscal balance between central cities and suburbs.” Harrigan (1981) writes that minority participation in city government employment is increased by residency stipulations, although Gonzalez et al (1991) indicate that the U.S. Department of Justice has sued suburban jurisdictions with requirements for violation of equal opportunity laws.

According to Carte & Carte (1975), August Vollmer opposed residency requirements, in spite of the fact that he had them in place in Berkeley when Wilson was hired. It is possible that Vollmer simply lost out to a legislative decision that overrode his own preference.

Organizations that exist to focus concerns on civil or human rights have typically supported residency requirements for police in recent years. The NAACP (1995) has stated that residency requirements improve police accountability to the community. The National Black Police Association (NBPA) (2007) has also called for mandatory residency, ostensibly for accountability for brutality concerns, as has the Texas Civil Rights Project (2005). Further, the ACLU of Southern California (1994) indicated in its study that residency was desirable and that

it should be encouraged. While they did not call for actual requirements, this is presumably because California state code prohibits localities from imposing them.

The St Louis University Law Journal (1973), in a discussion of legal ramifications of continuous residency requirements, listed two specific reasons why residency requirements were so important. One is that “police are very often the largest and most important occupational groups in a municipality.” The second is that police officers “come into more vital, daily contact with citizens” than other municipal employees, so their interaction with the community reflects on the entire government.

Routine Activities Theory

Routine Activities Theory (frequently referred to as Routine Activity Theory) is a criminological theory promulgated by Felson and Cohen in 1979 (Clarke & Felson, 1993). The original theory argued that criminal activity required three things, a motivated offender, a suitable target, and the absence of a capable guardian (Felson, 1998). Definitions of guardianship were not centered on police (Clarke & Felson, 1993), but included a wide variety of other potential observers (Jones, 2001). This resulted from the view that police rarely came upon crimes in their actual commission.

Later expansion of the theory accounted for a broader view of crimes. Whereas the initial theory discussed predatory crime, later viewpoints included a wider variety of crimes (Cornish & Clarke, 1998). Three concepts have been added to the theory in recent years (Taylor, 2004). One is handlers, who are people that exert influence over motivated offenders and may help dissuade them from crime. A second is the place keeper, a person or thing that controls access or reduces the suitability of the target. The third area is the structural choice component. Here,

among a variety of factors, motivated offenders consider the structure of the target and attempt to determine whether one guardian is more capable than another (Cornish & Clarke, 1998). These concepts permit police more involvement in the guardian area, as fear of the police becomes an important factor in demotivating crime.

The idea of place keepers and structural choice is essential to understanding the role of police as capable guardians. There are relatively few police in the United States. According to the Bureau of Justice Statistics, the average American jurisdiction had 2.5 sworn police officers per 1000 population (Hickman & Reaves, 2006). This encompasses all officers on any given department, including managers, support personnel, and the off-duty officers necessary to cover a locality 24 hours a day, every day of the week and year. Police officers simply are not present in most locations or situations until after they have occurred.

What allows police to extend their reach beyond their actual numbers is the idea of omnipresence, as advocated by the IACP (2007) when discussing take home cars. The thought that some police officer is always around and may by pure chance happen to run across you is a powerful incentive not to commit a crime to those who believe this. Traffic law enforcement falls into this concept particularly well and it is the reason why, for example, tickets are issued to speeders rather than simply stationing visible officers at problem traffic spots.

When considered in light of place keeping and structural choice, the presence of a police car at a location should make a police officer a more capable guardian, even if the officer themselves is not actually present.

Organizational Culture

While the effect of residency requirements on capable guardianship is the basic question of this study, an additional underlying theoretical concern is the effect of residency on the law enforcement culture. As culture has a deep influence on how individuals within the organization view their responsibilities and obligations, this is an important point of consideration.

Organizations are all subject to common practices of group behavior (Greenberg & Baron, 2003), the values driving these activities being generally referred to as organizational culture (Robins, 1997). Occupational cultures also tend to develop across organizational lines, showing somewhat consistent behavior among occupational classes regardless of organizational identity (Ivancevich & Matteson, 1999). Within law enforcement, this is called the police subculture (Hess & Wroblewski, 2004). The police subculture is sometimes divided by regional issues.

Police behavior is frequently influenced by deep cynicism (Thibault et al, 2001). Police officers spend significant portions of their day having difficult interaction with other people. Even citizens who are normally supportive of police have contact with them under extraordinary circumstances and on their worst days.

While law enforcement is not the only occupation that is cynical, it is important to facilitate positive interaction between police and the citizens they serve (Calhoun & O'Neil, 2003). This helps police to understand the value and decency of the majority of people. Police administrators who desire to build good community relations search out opportunities for their officers to have these types of interaction (Skolnick & Bayley, 1986).

Cultural cynicism within police organizations is longstanding and difficult to overcome (Thibault et al, 2001). This frustration can lead to burnout, employee turnover, or mistreatment of citizens (Hess & Wroblewski, 2004). As organizational transformation is difficult and often

divisive (Harvey & Brown, 1996), it is important to ensure that the culture of individual police departments is best aligned with its desire to have good community relations (Nowicki & Punch, 2003).

While no empirical research exists to discuss how residency requirements affect organizational culture, it is known that positive interaction with private citizens improves police views of the public and the agency's relationship with citizens (J.M. Wilson, 2006). Most people, police or otherwise, have significant amounts of their positive influences and interactions with people while not working and in their private lives. It would seem to follow that off-duty police officers who lived within their communities would have more beneficial and positive interaction with the public when they were outside of work.

This would avoid the problem that the ACLU (1994) identified with the LAPD, that the police went home away from the people of Los Angeles. All of the interaction between most LAPD officers and Angelinos was while the officer was on-duty acting in official capacity or while the officer was on guard for problems. Positive experiences would be more likely to occur while off-duty in other communities. Police would not associate these off-duty experiences with their work community and no overlap would occur.

Community Policing

The broken windows theory was promulgated by Kelling and Wilson in 1982. Broken windows argued that the minor nuisances in a neighborhood grew into serious criminal activity. For the most part, many consider this the underpinning of the community policing concept (Cornish & Clarke, 1998). Community policing is often oversimplified and is, in actuality, a fairly difficult theory to explain. The ultimate desire of the theory is the improvement of

relations between police and the public to achieve an outcome of better living conditions for people. One specific method, and one heavily employed by police agencies that have adopted the community policing model, is to assign specially trained officers into the community to break down barriers and improve understanding between the two groups (Hess & Wroblewski, 2004). This is thought to increase discussion between them and make both groups better able to understand one another.

To facilitate this, some local governments have instituted programs to provide low or no cost housing for police officers to live in specific neighborhoods (Thibault et al, 2001). The thought is that the communities will be more trusting of the officer and that the individual police officer involved will have a better understanding of the neighborhood. These programs have proven very popular with people who live in the neighborhoods involved (Olesky, 1996), but have not become widespread. Some evidence exists to indicate that the programs are effective in reducing criminal behavior or improving trust between the officer and citizens (Olesky, 1996). This data is not generalizable to this discussion, however, because it involves study of single officers in very isolated or small neighborhoods. It does not involve wider residency requirements spread out over landmass.

Some do not consider community policing to be particularly new. In fact, much of the discussion regarding the concept sounds similar to Peel's thoughts when founding the London police service. Many police officers argue that this is simply harkening back to an earlier manner of policing in which police had closer relations with citizens (Thibault et al, 2001). There is some validity to this claim.

Police agencies, especially in the United States, often are significantly impacted by political currents. This has been true since the original police were instituted within the country (Miller,

1977; Carte & Carte, 1975). The overriding concern regarding police culture within the American criminal justice and political community for most of the past two centuries has been the elimination of police corruption (Skolnick & Fyfe, 1993). The practice of bribery or official favoritism has long been considered undesirable or abhorrent and many actions were taken to remove undue influence of individual officers by the citizenry and of tempting situations in which officers may stray (Neiderhoffer, 1967).

Following a significant corruption scandal in the late 1940s, Los Angeles hired William Parker to be the chief of police. Parker was considered a reform chief who was interested in the reduction of corrupt acts and the elimination of cultural corruption within the department. His solution, widely considered to be very effective, eventually was referred to as the professional model (Cannon, 1997; Bratton, 2007). Under this concept of policing, officers would avoid contact with citizens, especially business owners, outside of specific police activity. The desire was to limit the opportunity for influence peddling or to even build up significant relationships that could compromise the officers.

The professional model became very popular, in part due to movie and television productions featuring the LAPD. Many police departments adopted this approach or parts of it. During the 1972 Knapp inquest into New York City police corruption, some of the thoughts behind the model were brought forth and recommended for institution (Mollen Commission, 1994).

In many ways, police corruption became less of a concern within our society during the 1970s and 1980s. One reason often given is the success of the professional model in eliminating misconduct. Further, police as a whole were on the receiving end of a significant readjustment of pay in a large number of jurisdictions, bringing the average officer fully into the middle class (Smith, 1980) as well as providing health benefits for them and their families. There has long

been a view that there is some correlation to be found between salary and corruption, in the same manner that those with less money are more likely to engage in corruption or other criminal activity (Tolan, 2004; Farrington, 2004). Additionally, the crime rate soared during this time period and government institutions seemed to recover from the poor esteem in which they were held in the 1970s.

By the 1980s, the major frustration of the public in the United States was criminal behavior, especially violent crime and major property theft. The general citizenry were less concerned with police misconduct and significant numbers believed that this issue, at least in the wide scale, had been overcome. In many ways, they were correct. It was during that period that several issues combined to change the face of American law enforcement.

Local and state governments throughout the country worked together to raise wages and employment standards. The police, always a lower middle class job, moved into the middle class and most police officers who were industrious in working overtime could retire from the upper middle class. This had a side effect of allowing police to move into better housing, which was frequently in the suburbs due to the other problems that the urban core cities were experiencing during that decade (Levenson, 1976). By the 1990s, the police had left the cities along with large swaths of the rest of the middle class.

At this same time, government at all levels began to push for increased enforcement to reduce crime rates and incarcerate criminals. Local police were expected to be less tolerant, even of minor crime, and to hand out fewer warnings when having caught someone violating the law (Lardner & Reppetto, 2000). Part of this was a direct outcome from acceptance of Kelling and Wilson's broken window theory.

By coincidence, the illicit drug trade became an exceptionally large part of policing during the 1980s. Regardless of their black market status, illicit drugs reacted the same as any other market to economic forces. The sudden widespread availability of cocaine in a cheaper format, the crack rock, provided lower economic scale citizens with a less expensive alternative to other outlawed drugs. While other compounded drugs became cheaper and easier to distribute, nothing approached the crack epidemic for sheer violence and ancillary criminal conduct (Lardner & Reppetto, 2000). Crack was big business and allowed even line level drug dealers to obtain a lot of money. Police officers raiding mid-level distribution houses reported finding cash money in excess of what they could earn in a decade of work.

This combination of living separately from the citizenry, requirement to crack down upon the population that they served, and seeing some particularly mean people making large amounts of money almost certainly would have an effect on the viewpoint of the police and their interaction with their communities, at least in the larger picture. By the late 1980s and early 1990s, organizations concerned with human and civil rights, notably the ACLU and NAACP, were warning of an entirely new type of problem within American policing. Both groups, frequently considered on the fringe by the middle class, were ignored.

The Rodney King beating in 1991 provided real evidence to the American public of this problem (Baldassare, 1994). It was not merely the videotape of the incident that moved the public, but the reaction of the LAPD in initially refusing to look into the matter and tying together past issues between the LAPD and its citizens (Cannon, 1997). Not until the Los Angeles riot in 1992 did the impact of the poor community relations chasm become evident. Faced with widespread mayhem and the televised beating and murder of innocent people, the police in the area fled (Cannon, 1997). The LAPD, in fact, provided protection mainly for

government buildings and middle and upper class areas of the city (Tierney, 1994). Eventually, the U.S. Army had to send an active duty infantry brigade to the city to restore basic order and protect citizens.

Whatever reasons that may have resulted in the police leaving the scene, they did not retreat tactically, regroup, and come back in force, nor were they defeated by the mob and driven away. Commanders had officers stage at a bus depot and did not send them out to locations where uninvolved citizens were being attacked and brutalized (Cannon, 1997). This would seem consistent with one theoretical argument for police residency, that officers who live in a community care more about it than those who do not. Anecdotal evidence to this exists in that two officers who lived in the community most affected by the initial rioting refused to obey the order to leave and were credited with saving multiple lives during the first hours of the riot (Cannon, 1997).

By the end of the riots and their aftermath, the Los Angeles promulgated professional model of policing had been discredited in many quarters and the community policing model was in ascendancy. In 1994, an investigation into the New York Police Department concluded that a new type of corruption had taken root in their agency. The Mollen Commission (1994) redefined corruption to include the intentional mistreatment of citizens and civil rights violations. This inquiry determined that the corruption faced now was different than the corruption uncovered by the Knapp Commission in 1967, in that officers weren't accepting small value bribes for overlooking public morality violations. Instead, groups of police were now robbing citizens, taking money by force, or simply beating them because they could. Mollen specifically cited a break in rapport with the general community and the lack of positive interaction between police

officers and the general public, which facilitated a cynical, negative view of people that police dealt with while working.

Community policing is a two-fold concept and New York adopted the idea wholesale during Rudolph Guliani's mayoral administration, at least in part due to the recommendations made by the Mollen Commission (1994). Often discussed is the sharp approach of the NYPD during the mid-to-late 1990s in which police stringently enforced minor nuisance crimes in accordance with the broken window theory, resulting in an extraordinary drop in violent crime, including a nearly 70 percent reduction in murders (Lardner & Reppetto, 2000).

Just as frequently not discussed was the NYPD's rapprochement policy, the second prong of community policing, in which the police department attempted to build personal bonds between police officers and the citizens in the area they worked (Lardner & Reppetto, 2000). This second part was summed up in the CPR model, standing for Courtesy Professionalism Respect, and involved training in how to speak to people, diversity, and relationship building (Bratton, 1998). It is noteworthy that during the general time period of the Mollen Commission and the NYPD's response to it, there was a push to reinstate police residency requirements (Hicks, 1992).

Legal Issues

Residency requirements are lawful under the U.S. Constitution (*McCarthy v. Philadelphia Civil Service Commission*, 1976). In this landmark decision the Supreme Court indicated that such requirements served a valid public purpose that did not violate the free association rights of their employees. Case law requires that residency requirements meet two basic tests: that there be a rational basis for the policy and that there is a compelling government interest in propagating the policy. In deference to this precedence, legal issues that have occurred since

have either taken place in the state judicial system regarding state constitutions or in the state legislative arena.

In *Detroit Police Association v. Detroit*, a 1972 case that predated *McCarthy*, a federal appeals court laid out a framework for why the city desired to maintain residency for police, in that “the council wants – desperately needs – to promote a feeling of trust, confidence, and fraternity between the people of Detroit and their police department.” (St Louis University School of Law, 1973)

In recent years, there have been dozens of court cases regarding detail issues of residency requirements. These are not worth discussing because they are case specific, in that they are arguments regarding whether someone was surveilled living at an outside location or how many days constituted a weekend getaway.

Of more value are the several cases that have been brought forth in state court arguing issues under provisions of state code or, more importantly, state constitutional issues. There have been a number of these decisions restricting residency rules and how they are enforced (*Trager v. Kampe*, 2003; *Brockton Police Association v. City of Brockton*, 2003; *Fedanzo v. City of Chicago*, 2002; *Morgan v. City of Wheeling*, 1999; *Seabrook Police Assn. v Town of Seabrook*, 1993; *Int. Assn. of Firefighters v. Napolitano*, 1986; *Lima v. State*, 2009)

Police labor groups have pushed for striking residency requirements. Such mandates are unlawful in a number of states. This includes Virginia (Code of Virginia § 15.2-1525), which changed its law in 1997 in response to actions by the Richmond City Council.

A number of legal decisions occurred prior to the *McCarthy v. Philadelphia* case (1976), with various outcomes. Some were unsuccessfully based on freedom of movement ideas (notably *Shapiro v. Thompson* (1969)). A second notable case in this vein was *Ector v. City of Torrance*

(1973), a California case decided allowing residency requirements that was denied certiorari by the U.S. Supreme Court (1974). *Ector* is valuable because of the city's defense. While the plaintiff argued for a Constitutional right to commute, Torrance laid out seven reasons for upholding continuous residency mandates. They were ethnic balance of city agencies, reduction of minority unemployment within the locality, improved relations between minorities and city employees, reduced absenteeism, an increased employee stake in and knowledge of the city, emergency availability, and economic stimulus (Rhyne et al, 1977).

In other states, unions and police employee organizations have lobbied local boards and state legislatures to repeal requirements or enact state bans on such mandates. Their success has been varied. This is in part due to the economic and tax arguments involved, as well as the accountability issues brought up by other interest groups.

In 2002, Virginia instituted a law permitting local governments to provide grants or low-interest loans for employees, including police officers, to purchase or rent homes in their jurisdiction (Virginia Code § 15.2-720.1).

Conclusion

The literature review of this issue has attempted to tie the matter of police residency to the broader theoretical concepts involved with organizational behavior, community policing, and Routine Activities Theory. While residency has been shown to be an old and divisive issue, with implications for a local economy and government budget, the research interest here is on continuous residency mandates and their effect on a police department's capability as guardians and interaction with its community. Residency would seem to have a correlation with organizational effectiveness and its cultural view of the general citizenry.

As regards Routine Activities Theory, organizational effectiveness would seem to be as easily considered in the vein of the capability of police to act as guardians. Further, the presence of the marked police car at the residence would provide a method of place keeping consistent with enabling the guardian to be more effective, thus playing into the structural choice model, where the potential offender makes a rational decision as to whether to commit a crime based in part on their perception of the guardian's ability to stop or capture them. In the next chapter, a methodology will be set forth to study and measure whether any such correlation exists between residency and capable guardianship.

CHAPTER III

Methodology

Introduction

The sparseness of previous literature on this issue (Coleman, 1983; Mehay & Seiden, 1986; Gonzalez et al, 1991) provided a fairly wide latitude in developing a research methodology to study police residency requirements and their effect on police as guardians. The purpose of this study is to determine whether police residency impacts the effectiveness in which police act as a capable guardian to the community under Routine Activities Theory. With that in mind, and considering the hypotheses listed as well, a cross-sectional study of a single jurisdiction was conducted. The desired effect was to find differences in residency patterns and study them to find if police residency affects crime rate and social disorganization. This chapter will describe the research methodology used in this study.

Research Design

The method of research was a cross-sectional study using aggregated official data that measured police residency, crime rates, and evidence of social disorder for six months at 25 apartment complexes in Chesterfield County; the study used secondary data available through the Chesterfield Police Department and the U.S. Census Bureau. In one instance, public advertisement for apartments, primary data was collected from *The Apartment Guide* online edition.

Chesterfield County, Virginia, was selected for research. As with all of Virginia's cities and many of their counties, Chesterfield has both a police department supervised by an appointed chief and a sheriff's department, which is headed by an elected official. The Chesterfield Police Department is the primary law enforcement agency for the jurisdiction, while the Chesterfield Sheriff's Office is responsible for corrections, court security, and civil process. Officers of the police department are permitted to drive home marked police cars if they live within the County, while sheriff's deputies are not. The take home car program was a primary reason why Chesterfield was selected for study¹. The basis for this study is that the extended presence of a police car is an obvious sign that a police officer lives in the area. Routine Activities Theory indicates that this should be a deterrent to criminal acts by residents and visitors of the area.

Chesterfield County is a suburb of the city of Richmond with a 2007 estimated population of 306,000. It is 446 square miles, had a median age of 35.7, and median household income of \$62,384 (Chesterfield County, 2007) at the time of the study. There were 69 distinct multi-family housing communities, referring to complexes of apartments or townhomes that are rented. The government is organized under the county executive format set forth in Chapter 5 of Title 15.2 of Virginia code (Virginia codes 15.2-500 through 15.2-542) and had 56 census tracts subdividing population information.

The Chesterfield Police Department had 506 authorized sworn positions, 107 non-sworn full-time civilian employees, and 46 part-time civilians, not including the communication center, which is housed jointly with the fire department. There were two community policing sections containing 11 officers, several of whom were assigned to programs in apartment communities. Approximately 90% of the full-time sworn officers lived in the County and took their police vehicles home with them when off-duty.

¹ The author is employed as of this writing by the Chesterfield Police Department as a police captain.

Research Question

Does police residency impact the effectiveness in which police act as a capable guardian to the community under Routine Activities Theory?

Hypotheses

Hypothesis One

H₁: Jurisdictions with higher levels of police residency have lower rates of Group A crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The independent variable for H₁ was the number of police officers residing in the selected apartment complexes who drove their vehicles home.

Dependent Variable

For H₁, the dependent variable is the National Incident Based Reporting System (NIBRS) Group A crime rate at each apartment complex. NIBRS is a centralized U.S. government program that receives information on crime occurrences reported to various law enforcement agencies. These data are the statistic referred to by governments and journalists when discussing crime rates. It is a common measurement for determining police effectiveness (Levitt, 2004), as well as whether a capable guardian existed.

Control Variables

Two control variables were used. They are income and race. One potential control variable, population density, sometimes discussed for crime rates was not included. The nature of the study already controlled for this. Density is sometimes regarded as a correlate of crime (Sampson, 2004). This problem is resolved since only attached multi-family dwellings are the sites selected for this study.

Income

Income levels have a longstanding correlation with crime rates (Tolan, 2004) and are widely regarded as affecting them (Farrington, 2004). Specific income statistics for the various apartment complexes did not exist. As a result, the income variable was proxied using the rent for a two-bedroom apartment. This substitute was appropriate because most communities in which the housing costs are similar have residents whose incomes are similar. Rent for each complex was determined through their public advertisements.

Racial Demographics

Racial demographics are a widely used variable correlated with crime rate (Sampson, 2004). There is some argument as to why to do so. In this case, it is used because Bureau of Justice Statistics reports (2005) indicate that racial minorities are victims of criminal activity more frequently than non-minorities and are arrested more frequently by police than non-minorities (Petersilia, 2000). Smith's 1980 study of St. Louis County police forces also used race as a control variable.

Hypothesis Two

H₂: Jurisdictions with higher levels of police residency have lower rates of Group B crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The independent variable for H₂ was the number of police officers residing in the selected apartment complexes who drove their vehicles home.

Dependent Variable

For H₂, the dependent variable is the NIBRS Group B crime rate at each apartment complex.

Control Variables

As with H₁, income and race are used as control variables.

Hypothesis Three

H₃: Jurisdictions with higher levels of police residency have lower levels of social disorganization, as measured by calls for police service, than those with lower levels of residency, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The independent variable for H₃ was the number of police officers residing in the selected apartment complexes who drove their vehicles home.

Dependent Variable

For H₃, the dependent variable is police calls for service at each apartment complex.

H₃ involves using calls for service as evidence of social disorganization. Other research on social disorganization has used police calls as a proxy measurement (Bursik, 1998; Warner & Pierce, 1993).

Control Variables

Income and race were used as control variables in the same manner as with the other two hypotheses.

Sampling Strategy

This study employs a nonprobability sample using 25 data points. Twenty-five apartment complexes from within Chesterfield County were selected for the study. While Chesterfield was home to 69 multi-family complexes, only 25 were selected for study. This was to provide for a manageable data set, as well as to ensure that the variables considered are similar. For instance, several of the complexes carried as multi-family by the County government had fewer than ten units. Trailer parks were also excluded, in part because the last Chesterfield police officer known to have lived in one of them was over two decades ago. All of the 25 complexes studied were attached dwellings with multiple units per building and with greater than 125 units.

The ten largest complexes in which police officers with marked take home cars resided were selected to ensure that a comparison could be made, then the 15 largest that did not have a police officer residing there. Most of the ten complexes where officers lived had changes in the

number of the officers during the study period. Following the selection of the apartment complexes, data was obtained relative to each.

Number of Officers Residing in Each Complex

The independent variable for all three hypotheses was the number of police officers residing in the selected apartment complexes who drove their vehicles home, compiled for each month between July and December 2007. The sampling frame for this data is employee address lists maintained in a database by the Chesterfield Police Department and aggregated by the author. The police department agreed to provide the information in aggregate and without identifiers as to where any individual officer may live.

Income

Income was one of two control variables used for each hypothesis. Specific income statistics for the various apartment complexes did not exist. As a result, the income variable was proxied using the rent for a two-bedroom apartment. This substitute was appropriate because most communities in which the housing costs are similar have residents whose incomes are similar. The sampling frame to obtain rent for each complex was through their public advertisement in the March, 2008, online edition of the *Apartment Guide*.

Racial Demographics

The percentage of minority population was the second of the two control variables used for each hypothesis. Racial demographics were not available for each apartment complex. As such,

the sampling frame for this data was the U.S. Census Bureau statistics for the surrounding census tract, obtained through common access to a public government Internet site. Observation of the apartment complexes by the writer in the course of his normal police employment indicates that the racial makeup of the complexes do not seem abnormal to the census information. There were a sufficient number of census tracts that the population per tract is low. Several of the census tracts were made up almost entirely of apartment complexes being studied.

NIBRS Group A Crime

For H_1 , the dependent variable is the National Incident Based Reporting System (NIBRS) Group A crime rate at each apartment complex. NIBRS is a centralized U.S. government program that receives information on crime occurrences reported to various law enforcement agencies.

NIBRS reporting was already broken down by apartment complexes because of a civilian crime-prevention position partly funded by a grant. The sampling frame was a crime report compiled each month for all multi-family complexes by the Chesterfield Police Department, provided to the author by the department. This report and data was already available to the public under Virginia's Freedom of Information Act (Virginia Code § 2.2-3706).

Group A offenses were entered into SPSS by number of incidences for each month between July and December 2007 in aggregate.

NIBRS Group B Crime

For H_2 , the dependent variable is the NIBRS Group B crime rate at each apartment complex. Group B is made up of more minor offenses sometimes associated with quality of life issues as discussed in broken windows theory (Kelling, 2003) or community policing concept. As with

Group A crime, the sampling frame was the monthly report run by the Chesterfield Police Department for each apartment complex, provided to the author by the department.

The Group B offenses were available to the public in the same manner as Group A offenses. Group B offenses were entered into SPSS by number of incidences per month between July and December 2007 in aggregate.

Police Calls for Service

For H₃, the dependent variable is police calls for service at each apartment complex. The sampling frame was a different report prepared each month by the Chesterfield Police Department for their apartment complexes, provided to the author by the department.

Calls for service were entered into SPSS by number of incidences per month between July and December 2007 in aggregate.

Measurement

Police Officer Residency

This information was provided by the Chesterfield Police Department, broken down by each apartment complex. It is not available to the public, but the chief of police agreed to supply it. The data was in aggregate format to deidentify the residency of any particular officer. No danger of such identification exists, however, in a police department as large as that in Chesterfield. Further, the officers being discussed already drive a marked police car with license plates specific to that vehicle to their residence, which is a more likely manner in which someone could identify where they lived.

This data was entered into the database as an interval scale.

Group A Crime Rate

This statistic was gathered from the Chesterfield Police Department, using a publicly available report prepared monthly indicating how many of each Group A crime occurred in each apartment complex. It is aggregate data with no personal identifiers.

Group A crime rates are a somewhat misleading statistic. Strictly speaking, they are not a rate and so were converted to a ratio to be useful. The actual report to NIBRS involves a raw recording of incidents. The number of incidences are commonly converted to a ratio by dividing by population number (usually per 1000 or 10,000 citizens) to provide what is referred to as a crime rate. In this instance, population can be inferred by multiplying the number of units in the apartment complex by the census average population per dwelling for the tract. Since population may vary over time due to actual occupancy, the number of incidences was converted to ratio by dividing by the number of units in each apartment complex. The ratio in this case is the number of Group A offenses per unit.

The formula to create the ratio was $A/U = R_A$ where

A = NIBRS Group A Crime Numbers

U = Apartment Units in Complex

R_A = Group A Crime Ratio

Group B Crime Rate

This statistic was gathered from the Chesterfield Police Department, using a publicly available report prepared monthly indicating how many of each Group B crime occurred in each apartment complex. It is aggregate data with no personal identifiers.

Crime rate data was entered into the database as an interval scale on a ratio. A ratio was selected to convert the interval rate data into a more accurate rate per population measurement in the same manner that Group A data was handled.

The formula to create the ratio was $B/U = R_B$ where

B = NIBRS Group B Crime Numbers

U = Apartment Units in Complex

R_B = Group B Crime Ratio

Police Calls for Service

Calls for service were calculated using a Police Department report of how many calls were received for each apartment complex. Calls that are not considered evidence of social disorganization were removed and the total entered into the dataset. Because certain police calls are not evidence of social disorganization, they were not included in the measurement. Specifically, alarm activations and suspicious situations are excluded. Alarm calls most frequently are the result of malfunctions or error by operators and have nothing to do with societal dysfunction. Even when valid, alarm activations would then be measured under other call categories (such as a domestic disturbance) or Group A or Group B crime rates (if a burglary were occurring). Suspicious situations calls are very subjective and frequently invalid, but are

generally not viewed as signs of social disorganization since the complainant contacts the police in accordance with societal norms.

Other Group A crimes, such as domestic battery, were also excluded unless they happened in a public location. Domestic issues in particular are widely viewed as a problem that the police have little proactive effect on.

This data also involved an interval scale converted to a ratio. The formula was similar to the previous two items.

$C/U = R_C$ where

C = Police Calls for Service Numbers

U = Apartment Units in Complex

R_C = Calls for Service Ratio

Incomes

Incomes were proxied using apartment rent. The involved apartment complexes advertise their rents in several publicly available circulars and on the Internet. All of the data was obtained from the *Apartment Guide* online edition (March, 2008) and is entered as interval scale data.

Racial Demographics

The appropriate census tract for each apartment complex was determined and this data was obtained from the U.S. Census Bureau (2008). This data was also interval data, but was expressed as a ratio in that it is published as a percentage. Specifically, it is the percentage of the population for the tract that is made up of minorities.

Data Collection

Police Officer Residency

Database information on residency for Chesterfield police officers was obtained for each month between July and December 2007. Upon review of the information, the data as to the number of officers residing in each apartment complex was compiled and entered into the SPSS database. Access to the database was approved by the chief of police for Chesterfield County and was easily arranged through the author's employment there.

Group A Crime Rate

The reports for Group A crime were compiled monthly for each of the apartment complexes and the public reports were forwarded when requested.

Group B Crime Rate

The reports for Group B crime were compiled monthly for each of the apartment complexes and the public reports were forwarded when requested.

Police Calls for Service

The reports for calls for service were compiled monthly for each of the apartment complexes and the public reports were forwarded when requested. These reports were then reviewed for call types, with calls that were not evidence of social disorganization eliminated from the count. Types of calls that were not considered included domestic situations, suspicious incident calls, alarm services, or towed vehicles. These types of service calls are either signs of social

organization (alarm or suspicious incidents) or considered something that the police have no real deterrent effect upon (domestic disputes).

Approximately one-third to three-quarters of the calls for service in any complex were not included in the data count. As an example, in one complex the management contracted with a tow company to remove any vehicles that did not have a parking permit from the grounds during the overnight hours. The tow company, in accordance with a County ordinance, contacted police each time they towed a car and a call for service was entered to track the vehicle license plate and storage location in the event that the vehicle owner later attempted to report the vehicle stolen. These calls for service functioned in a similar manner to a researcher creating a dummy variable and no actual police officer was involved in these matters. Not only was the towing contract a sign of social organization rather than disorganization, in that the property owner was showing care for who was on their property, but these were not even police calls for service in the proper sense. These tow calls made up three-quarters of the calls in one of the apartment complexes.

Racial Demographics

The U.S. Census Bureau data for Chesterfield County was downloaded by census tract from the Bureau's website. The appropriate tract for each complex was determined and the minority population percentage was entered into the SPSS database.

Income

The proxy for income, apartment rents, was obtained from the *Apartment Guide* website. Each of the selected complexes advertised through the publication and their advertised rent data was published online.

Scope and Limitations

The study encountered several limitations. Crime rate as a measurement is imperfect, since there are people who are the victim of crimes who choose not to report it to police for whatever reason. The National Crime Victimization Survey was developed for this reason, but its results are not available at the jurisdictional level. Unfortunately, the true crime rate is not able to be determined and we are left with the official rate consisting of those acts reported to police (Maxfield and Babbie, 2004).

Further, the activity rate of the individual officers who live in the apartment complexes is unknown. For instance, one officer may be proactive in the community, frequently out of their home and interacting with other residents. Another officer may be more inclined to stay in their home when off-duty.

The effect, if any, of an officer living in an apartment complex but not driving their vehicle home is beyond the scope of this study. There are several reasons why this may occur. An officer may simply choose not to drive the marked vehicle home, they may be suspended from employment, they may have lost the take home car privilege due to misconduct, or they may leave the vehicle at the County garage for service while on their normal days off or vacation.

Reliability and Validity

The method of study has commonly been determined to be valid in other research. Crime rates are frequently used as a measurement to determine police effectiveness (Levitt, 2004). Smith (1980), in particular, has used crime rate as a measurement in studying police residency.

Police calls for service are sometimes used as a measure of social disorganization (Bursik, 1998; Warner & Pierce, 1993).

Income (Farrington, 2004; Tolan, 2004) and racial demographics (Petersilia, 2000) are widely viewed as affecting crime rate, a dependent variable.

Content Validity

Crime rate has historically been considered a measure of effectiveness of police departments within a jurisdiction. The study compared residency rates in a varied format controlling for factors that previous research has shown affect crime rates.

By reviewing the data in a six month aggregate, the study had the benefit of reducing the likelihood that other issues were affecting the crime rate. It also diminished the concern that an officer moved into or out of a complex, but was not noticed, thus having an inaccurate effect on the various dependent variables.

Criterion Validity

The study makes measurement using a variety of criteria that have been previously used to study the effectiveness of police and their capability as guardians. Here, the research adds a variable (residency) to determine its effect when considered with other variables that have previously been studied.

Construct Validity

The research provides a direct correlation possibility between the place keeping ability of the police car to help measure effectiveness of police officer residency as improving capable guardianship. It is directly on point.

Reliability

Crime rates are an area that has been studied previously and are considered a valid factor in researching police effectiveness (Levitt, 2004). These rates have specifically been applied to the police residency issue before (Smith, 1980). The volume of calls for police service has been used in studying social disorganization (Bursik, 1998). Control variables have been included to ensure that other known factors are not affecting the crime rates. The study, as set forth, is easily repeated using different subjects.

Conclusion

Although a difficult subject with virtually no empirical research extant, a methodology was designed to study whether police residency impacted the effectiveness of police in acting as capable guardians under Routine Activities Theory. A review of police residency in apartment complexes was used to consider whether the residency of officers with take home cars affected crime rates and social disorganization, using previously identified control variables. This data is presented in the next chapter.

CHAPTER IV

Data Analysis

Introduction

After establishing a valid and workable methodology, the study moved on to the process of obtaining data and analyzing it for relevancy. An Ordinary Least Squares (OLS) Regression was used to analyze data on police residency in apartment complexes and its effect on crime rates and calls for service. A rich dataset was obtained and indicates that police residency has a statistically significant effect on Group A crimes rates and social disorganization as measured by police calls for service.

The data, covering the period of July through December 2007 using 25 apartment complexes in Chesterfield County, Virginia, was obtained and analyzed using the methodology discussed in Chapter 3. The data, broken down by apartment complex, is presented in Appendix A.

Data Analysis

The data was entered into an SPSS database and analyzed using OLS regression, as well as a Paired Sample *t*-test comparison of the means between those communities that had officers in residence and those that did not. Regarding the comparison, a dummy variable was created to determine whether a statistical relationship existed between the three dependent variables (Group A crime rate, Group B crime rate, and police calls for service rate) and the independent variable, police residency. As all of the data obtained is at the interval or ratio level of measurement, these are the proper method for these types of variables (Shane, 2007).

Decision Point

A confidence interval of 95 was used, resulting in a decision point of $p < .05$. This is the standard for such research (Moore, 1995; Frankfort-Nachmias and Nachmias, 2000; Allison, 1999). Because the hypotheses were directional, a one-tailed analysis was used (Kachigan, 1991). Allison (1999) states that $p < .05$ indicates that the finding is significant, while $p < .01$ shows the finding is highly significant.

A standard for Pearson's correlation and r statistics was derived from Mason, Lind, and Marchal (1999) and Shane (2007). Correlation statistics of less than .3 were considered weak correlations, from .4 – .6 were considered moderately strong correlations, and those greater than .7 were considered strong correlations. Mason et al (1999) indicated that these scales were slightly malleable, in that a statistic of .299 would be stronger than one that is .001, even if they were both in the weak correlation range.

Regarding critical values for F statistics, Snedecor and Cochran (1980) indicate that at df (3,21), a finding above 3.07 would indicate support for the Research Hypothesis. A finding higher than 4.87 would mean that it is strongly supported. Frankfort-Nachmias and Nachmias (2000) and Kachigan (1991) state that these two figures represent $p < .05$ and $p < .01$, respectively, for a two-tailed analysis with df (3,21).

The straight comparisons of means were strictly a percentage, but a t -test was also run. The critical values used for t at df (24) were 1.711 ($p < .05$), and 2.492 ($p < .01$) (Fisher & Yates, 1974). Mason et al (1999) state that these levels indicate that there is strong and very strong evidence that the null can be rejected, respectively.

Means Testing

The comparison of means tests are provided separately from the regression analysis for ease of reference. A straight comparison of residency to non-residency was conducted, as well as a Paired Sample *t*-test. The findings are presented below.

Table 4-1
Comparison of Means for Police Residency and No Police Residency

	Group A	Group B	Calls for Service
No Residency	.10753	.00327	.18140
Residency	.02360	.00140	.05980

Table 4-2
Paired Sample *t*-test Results for Police Residency and Dependent Variables

	<i>t</i>	Sig.
H ₁	-3.000	.003
H ₂	-3.967	.0005
H ₃	-2.637	.013

Hypothesis One Regression

H₁: Jurisdictions with higher levels of police residency have lower rates of Group A crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The number of police officers living in the complex who drove their cars home over a six month period, measured on an interval scale.

Dependent Variable

NIBRS Group A offenses reported to police, measured on a ratio scale by raw number divided by apartment units.

Control Variables

The control variables measured were income, using the amount of rent as a proxy, and the rate of minority population, using census tract data as a proxy. These are interval data (income) and ratio data (minority population was entered as a percentage).

Data Analysis

The OLS regression of the data yielded the following results.

Table 4-3
 Pearson's Correlation for Hypothesis 1
 OLS Statistics for Police Residency and Group A Crimes with Control Variables

Decision Point is $p < .05$

	Group A Crime Rate	Income	Census Tract % Minority	Police Residency Ratio
Group A Crime Rate	1.000	-.700***	.562***	-.490***
Income	-.700***	1.000	-.589***	.142
Census Tract Minority%	.562***	-.589***	1.000	-.243
Police Resi- Dency Ratio	-.490***	.142	-.243	1.000

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 4-4
 Change Statistics for Hypothesis 1

R	R ²	Adj. R ²	Std. Error of Estimate	Sig. F Change	F Change	df1	df2
.811(a)	.657	.608	.035732	.000	13.421	3	21

a Predictors: (Constant), Rent per Unit, Residency, Census Tract Minority %

Table 4-5
Standardized Coefficient Statistic for Hypothesis 1

	Beta
Income	-.566
Census Tract Minority%	.136
Police Resi- Dency Ratio	-.376

Interpretation

A comparison of means between the police residency and non-residency dummy variables indicated that Group A crime was 21.95 percent lower in those apartment complexes in which police officers lived than in those in which no officers resided. The t -statistic was -3.0, which provided very strong evidence to reject the null hypothesis.

With a Pearson's Correlation statistic of -.490, the relationship between officer residency and Group A crime rate is a moderately strong negative correlation. The one-tailed significance test indicates $p = .006$, well below the decision point of $p < .05$.

In addition, there is a strong negative relationship between income and Group A crime rate, with a Pearson's Correlation statistic of -.700. This is not a surprising finding and has been a known factor in crime rates (Tolan, 2004; Farrington, 2004). The level of significance was $p = .000$, also below the $p < .05$ decision point.

There is a moderately strong positive relationship between the minority population percentage and Group A crime rate, with a Pearson's Correlation statistic of .562. The one-tailed significance test indicated a finding of $p = .002$, again below the decision point. Level of minority population is known to affect crimes rates, mainly as a result of the higher victimization rates of minorities (Petersilia, 2000).

The Beta statistic indicated that police residency had a greater effect on Group A crime rates than did the percentage of minority residents. Income had a stronger effect than did police residency, however.

The model displayed a strong correlation between the independent and control variables and the dependent, with an r of .811 and r^2 of .657. This was a surprisingly high level for an issue as complex as Group A crime rates, but multiple variables known to affect crime rates were controlled for simply in the selection of apartment complexes as the study location. These variables include population density, population age, and residential mobility (Shane, 2007). As such, the location of the study likely contributed to the high r .

With F being 13.421 and the Significance of the F Change indicating .000, the null is rejected. Considering that there is a moderately strong correlation between officer residency and Group A crime rate, combined with a level of significance test of $p = .006$, the research hypothesis is strongly supported.

Hypothesis Two Regression

H₂: Jurisdictions with higher levels of police residency have lower rates of Group B crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The number of police officers living in the complex who drove their cars home during a six month period, measured as an interval statistic.

Dependent Variable

NIBRS Group B offenses, measured as a ratio.

Control Variables

The control variables measured were income, using the amount of rent as a proxy, and the rate of minority population, using census tract data as a proxy.

Data Analysis

The OLS regression of the data yielded the following results.

Table 4-6
 Pearson's Correlation for Hypothesis 2
 OLS Statistics for Police Residency and Group B Crimes with Control Variables

Decision Point is $p = <.05$

	Group B Crime Rate	Income	Census Tract % Minority	Police Residency Ratio
Group B Crime Rate	1.000	-.400*	.267	-.195
Income	-.400*	1.000	-.589***	.142
Census Tract Minority%	.267	-.589***	1.000	-.243
Police Resi- Dency Ratio	-.195	.142	-.243	1.000

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 4-7
 Change Statistics for Hypothesis 2

R	R ²	Adj. R ²	Std. Error of Estimate	Sig. F Change	F Change	df1	df2
.423(a)	.179	.062	.004043	.237	1.528	3	21

a Predictors: (Constant), Rent per Unit, Residency, Census Tract Minority %

Table 4-8
Standardized Coefficient Statistic for Hypothesis 2

	Beta
Income	-.371
Census Tract Minority%	.014
Police Resi- Dency Ratio	-.138

Interpretation

The comparison of means between the police residency and non-residency dummy variables indicated that Group B crime was 42.8 percent lower in those complexes where police officers lived than in those where no officer was in residence and took their car home. The t of -3.967 indicates very strong evidence to reject the null.

With a Pearson's Correlation statistic of -.195, the relationship between officer residency and Group B crime rate is a weak negative correlation. The one-tailed significance test indicates a level of $p = .175$, well above the decision point of $p < .05$.

In addition, there is a moderately strong negative relationship between income and Group B crime rate, with a Pearson's Correlation statistic of -.400. As with Group A crime rates, income has been a known factor in crime rates. The level of significance was $p = .024$, below the $p < .05$ decision point.

There is a somewhat weak positive relationship between the minority population percentage and Group B crime rate, with a Pearson's Correlation statistic of .267. The one-tailed significance test indicated a finding of $p = .099$, again well above the decision point.

The Beta statistic indicated that police residency had a greater effect on Group B crime rates than did the percentage of minority residents. Income had a stronger effect than did police residency, however.

The model displayed a weak correlation between the model variables and the dependent, with an r of .423 and r^2 of .179. It is likely that the low correlations were the result of a very low number of Group B offenses committed in the apartment complexes during the study period.

With F being 1.528 and the Significance of the F Change indicating .237, the null is not rejected. With a relatively low Pearson's correlation and high level of significance test, the research hypothesis is not supported. No relationship can be drawn between police residency and Group B crime.

Hypothesis Three Regression

H₃: Jurisdictions with higher levels of police residency have lower levels of social disorganization, as measured by calls for police service, than those with lower levels of residency, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The number of police officers living in the complex who drove their cars home during a six month period, expressed as an interval.

Dependent Variable

Police calls for service at each apartment complex, measured as a ratio statistic, which is used as a proxy for evidence of social disorganization.

Control Variables

The control variables measured were income, using the amount of rent as a proxy, and the rate of minority population, using census tract data as a proxy.

Data Analysis

The OLS regression of the data yielded the following results.

Table 4-9
Pearson's Correlation for Hypothesis 3
OLS Statistics for Police Residency and Police Calls for Service with Control Variables

Decision Point is $p < .05$

	Police Calls For Service	Income	Census Tract % Minority	Police Residency Ratio
Police Calls For Service	1.000	-.796***	.721***	-.476***
Income	-.796***	1.000	-.589***	.142
Census Tract Minority%	.721***	-.589***	1.000	-.243
Police Resi- Dency Ratio	-.476***	.142	-.243	1.000

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 4-10
Change Statistics for Hypothesis 3

R	R ²	Adj. R ²	Std. Error of Estimate	Sig. F Change	F Change	df1	df2
.909(a)	.827	.802	.039548	.000	33.463	3	21

a Predictors: (Constant), Rent per Unit, Residency, Census Tract Minority %

Table 4-11
Standardized Coefficient Statistic for Hypothesis 3

	Beta
Income	-.570
Census Tract Minority%	.307
Police Resi- Dency Ratio	-.320

Interpretation

The comparison of means between the police residency and non-residency dummy variables determined that communities where a police officer lived had a 32.97 percent lower rate of calls for service than in those complexes that had no officers living there. The data displayed a t of -2.367, which indicated strong evidence to reject the null.

With a Pearson's Correlation statistic of -.476, the relationship between officer residency and calls for service is a moderately strong negative correlation. The one-tailed significance test indicates a level of $p = .008$, well below the decision point of $p < .05$.

In addition, there is a strong negative relationship between income and the calls for service rate, with a Pearson's Correlation statistic of -.796. This should not be a surprise, as evidence of relationships between income and social disorganization has previously been found. The level of significance was $p = .000$, also below the $p < .05$ decision point.

There is a strong positive relationship between the minority population percentage and police calls for service rate, with a Pearson's Correlation statistic of .721. The one-tailed significance test indicated a finding of $p = .000$, again below the decision point.

The Beta statistic indicated that police residency had a slightly greater effect on police calls for service than did the percentage of minority residents. Income had a stronger effect than did police residency, however.

The model displayed a strong correlation between the model variables and the dependent, with an r of .909 and r^2 of .827. As with the Group A crime rate, many of the multiple variables that affect crime rate also affect social disorganization and these were controlled for with the selection of apartment complexes as the location of study. In any event, this is a remarkably high r .

With F being 33.463 and the Significance of the F Change indicating .000, the null is rejected. Considering that there is a moderately strong negative correlation between officer residency and the calls for service rate, combined with a level of significance test of $p = .008$, the research hypothesis is strongly supported.

Descriptive Statistics

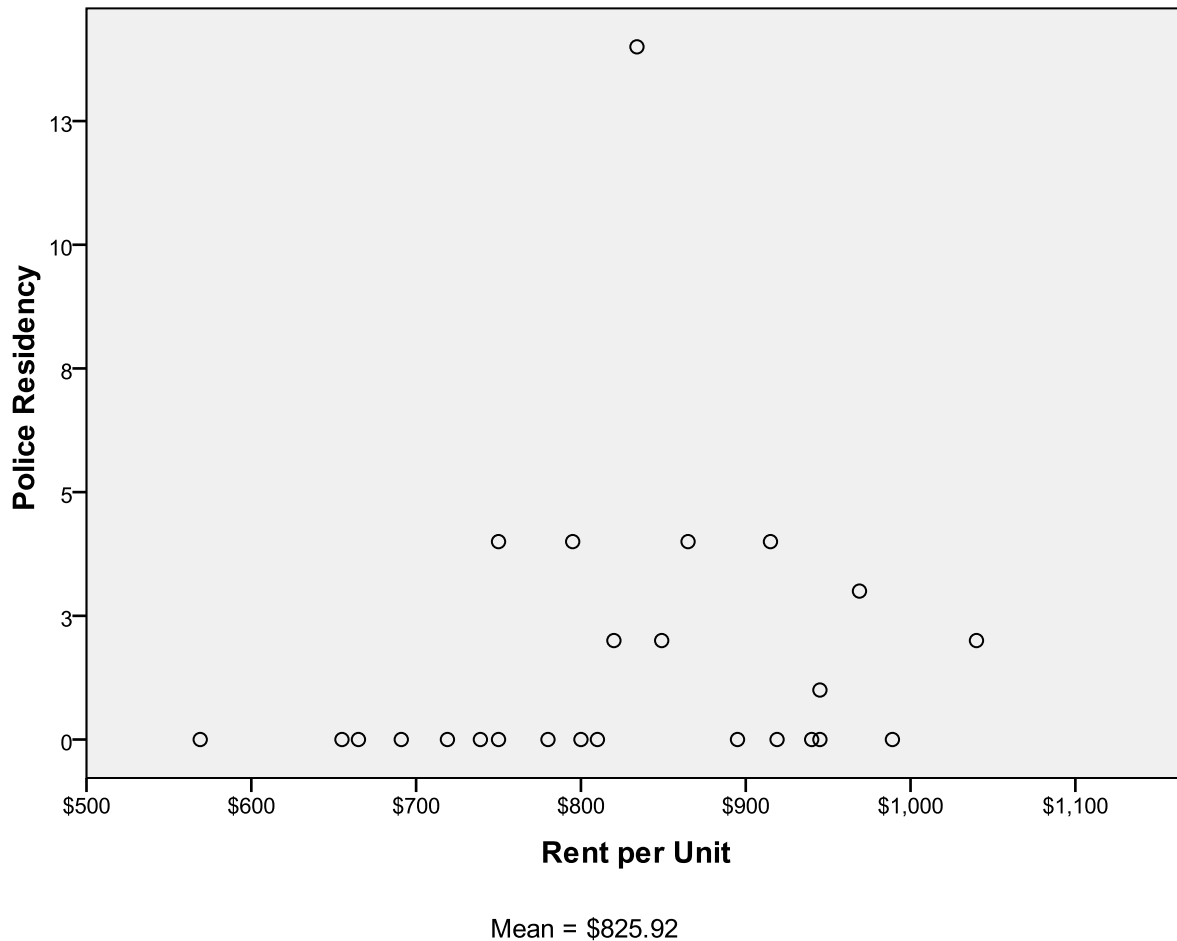
Table 4-12
Descriptive Statistics for Each Variable Considered

	Mean	Standard Deviation
Group A Crime Rate	.07396	.057089
Group B Crime Rate	.00252	.004175
Police Calls For Service	.13276	.088941
Income	\$825.92	\$117.549
Census Tract Minority%	.23748	.167226
Police Residency Ratio	1.60	3.014

Interrelationship of Residency and Rent Variables

A primary concern regarding the relationship between police residency and crime rates or social disorganization is that police officers, being intimately familiar with a community, would only select the safest places to live. The data do not support that concept. While there is a weak positive relationship in the data between residency and rent levels, this is spurious for several reasons. One is that the one-tail significance test results in a level of $p = .249$. Since this particular concern is nondirectional, the data indicates that this finding has nearly a 50 percent chance of being purely by accident or error.

Figure 4-1
Scatterplot Graph of Police Residency and Apartment Rent per Unit



The difficulty with this particular data area is that a hand count of police residency indicates that one-third of the officers live in apartments with rent above the mean of \$825, one-third live in complexes with rent below the mean, and a full one-third lived in a complex with a rent within \$10 of the mean. When this last group of officers are removed from the equation, virtually no correlation remains.

Even were the weak positive correlation defensible, the strong positive correlation between rent and the three dependent variables would lead one to expect a reasonably strong correlation

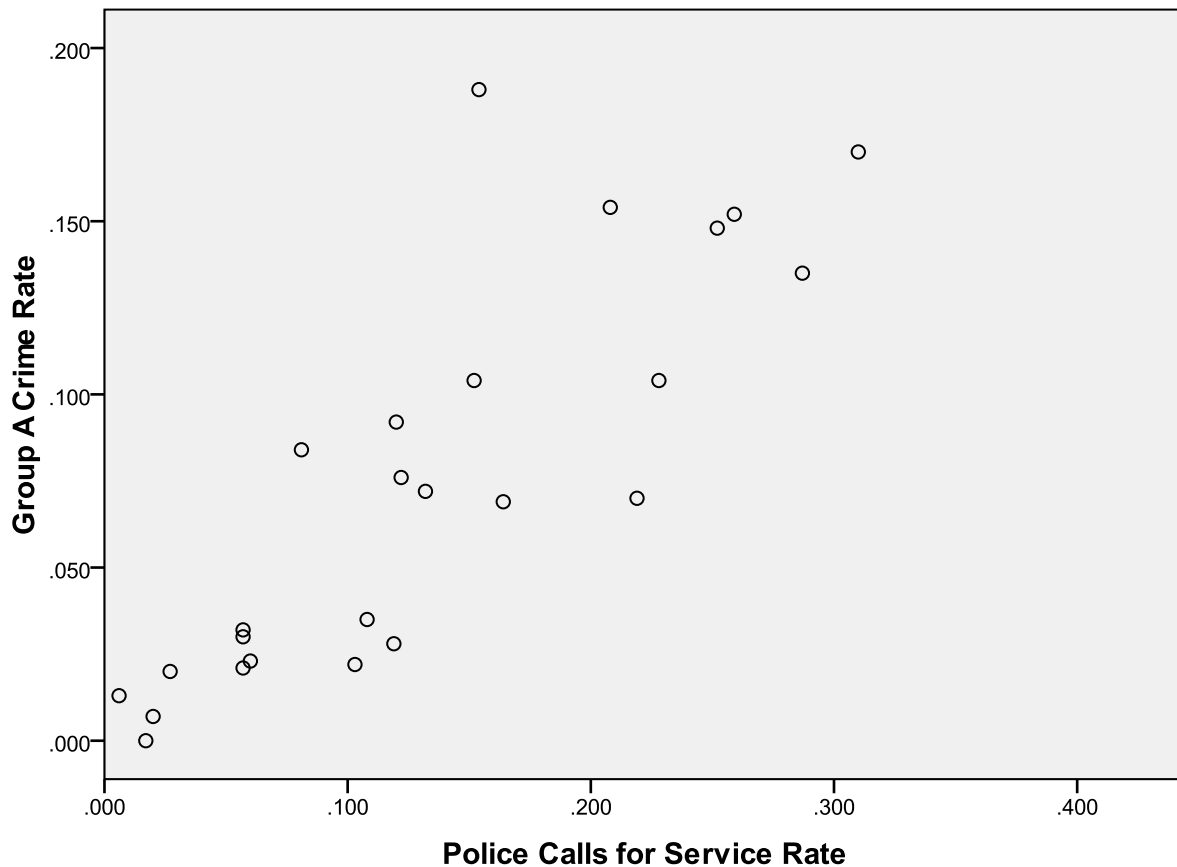
between police residency and rent levels. But the correlation between the latter is around one-sixth the correlation of the former. The argument that police are simply cherry-picking the best apartment complexes to live in is not supported.

Interrelationship of Police Calls for Service and Group A Crime Rate

The relationship between social disorganization and Group A crime is of some interest. As social disorganization was proxied in the study using police calls for service, the interaction between this datum and the Group A crime rate was considered. Due to the reporting method of the Chesterfield Police Department, there is significant overlap between these two data. Most crimes reported to police result in a police call for service being entered into the dispatching system, regardless of how the crime was reported (e.g. whether it was a true call for service or not). The opposite is not true, as many calls for service do not result in a crime being reported.

In terms of correlation, police calls for service and Group A crime rate result in a Pearson's of .842 with a p of .000, indicating a strong relationship. As noted, however, in many ways these data are collinear. The below graph displays the relationship between the various datapoints.

Figure 4-2
Scatterplot of Police Calls for Service and Group A Crime Rate



X-Axis Group A Crime Rate Mean = .074
Y-Axis Police Calls for Service Mean = .133

Only one apartment complex experienced a Group A crime rate above the mean while having a calls for service rate below the mean. One complex also had the opposite finding, in which its calls for service rate was above the mean while having lower than normal Group A crime. Two complexes were virtually at the mean of both data. Twenty-one of the locations, however, had the expected pattern, with both data either being above or below the mean for their respective category. Even so, there was some variation especially with the high end rates and some complexes that were especially high in proportion to the other locations in Group A crime were

not as high in calls for service when compared to the other apartment complexes. This would indicate that relatively few calls to police were made other than to report an actual crime, which could be a sign of stronger social disorganization with those communities.

Conclusion

A dataset was obtained involving police residency in apartment complexes and its effect of Group A crime, Group B crime, and social disorganization. Control variables of income and minority population were used. Following collection of data, OLS regression analysis was done on the set. It was determined that there was strong support for Hypotheses One and Three, but that the null could not be rejected for Hypothesis Two.

Chapter V

Conclusion

Introduction

In the past four chapters of this study, the author has identified a problem regarding an important public policy in law enforcement, whether police agencies should require their officers to reside in the jurisdictions where they work. The significance of the problem was explained, a research question and hypotheses were developed, and the study began. A review of existing literature and previous studies determined that most of what existed involved the expert opinion of police officials, but relatively little scientific research into the matter. What research did exist was limited and predated the development of the Routine Activities Theory, an important criminological theory conceptualized in the 1980s.

Following this, a methodology was prepared to appropriately gather and analyze data regarding this issue. A rich dataset was collected and an OLS regression run on it, providing solid evidence that police residency does matter.

Research Basis

Research Question

Does police residency impact the effectiveness in which police act as a capable guardian to the community under Routine Activities Theory?

Hypotheses

Hypothesis One

H₁: Jurisdictions with higher levels of police residency have lower rates of Group A crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Hypothesis Two

H₂: Jurisdictions with higher levels of police residency have lower rates of Group B crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Hypothesis Three

H₃: Jurisdictions with higher levels of police residency have lower levels of social disorganization, as measured by calls for police service, than those with lower levels of residency, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Background

Police Residency Requirements

Police residency requirements have been debated since the beginning of the modern police force in the 1820s (Miller, 1977). Much has been written about the matter, but there have been very few academic studies on the actual effect of residency mandates (Coleman, 1983; Mehay & Seiden, 1986; Gonzalez et al, 1991). Of those studies, most centered on the economic effects (Rhyne et al, 1977; Hirsh & Rufalo, 1985) or on the reasoning behind why officers chose where

to live (Coleman, 1983). Only Smith's study (1980) involved determination of how residency requirements impacted police effectiveness.

Many police experts and interested community groups indicate that requiring police to live in their jurisdiction has a positive impact on their interaction with the community (ACLU of Southern California, 1994; Carte, 1973; Harrigan, 1981). Other experts and labor groups argue that such mandates lessen the willingness of police to take enforcement action or that they reduce the availability of qualified applicants or officers (Coleman, 1983; Levenson, 1976; Chase, 1979; Swank and Conser, 1983).

In spite of efforts to study and professionalize police in the reform eras of the 1930s and 1960s-70s, there is no consensus on whether police residency requirements impact the effectiveness of police officers and organizations.

Routine Activities Theory

Routine Activities Theory involves the concept that criminal conduct is a normal and routine action for most of those who engage in crime. As such, for crime to occur, there needs to exist a suitable target, a motivated offender, and the absence of a capable guardian (Felson, 1998). Although the initial discussion of theory centered on predatory crime and involved a much broader group of guardians than just police officers, later discussion included them (Cornish & Clarke, 1998). In particular, as the theory has expanded to include property crimes and minor conduct, it has been adapted to involve the presence of place keepers, handlers, and structural choice (Taylor, 2004).

Place keepers and structural choice have provided police a significant role in theoretical discussion, as the thought that a police officer may be nearby or may interrupt a crime is

recognized as a deterrent to such activity (Cornish & Clarke, 1998). Marked or obvious police cars are an obvious point of such a discussion as most people will see a police car long before they see the actual officer and such vehicles have an outsized effect for just that reason.

Methodology

The study used a cross-sectional analysis of aggregated secondary data that measured police residency, crime rates, and evidence of social disorder for six months at 25 apartment complexes in Chesterfield County, Virginia.

Variables

Independent and dependent variables were developed for each of the three hypotheses, as well as appropriate control variables.

Hypothesis One

This hypothesis was studied using an independent variable of police officer residency, a dependent variable of the Group A crime rate, and control variables of income and racial demographics.

Hypothesis Two

With this hypothesis, the independent variable was police officer residency and the dependent variable was the Group B crime rate. This hypothesis also utilized control variables of income and racial demographics.

Hypothesis Three

When analyzing this hypothesis, an independent variable of police officer residency and dependent variable of Police Calls for Service were used. As with the other hypotheses, both income and racial demographics were used as control variables.

Decision Criteria

The study used decision points considered normal for statistical research (Frankfort-Nachmias & Nachmias, 2000; Moore, 1995; Isaac & Michael, 1995). A Confidence Interval of 95 was employed, with a decision point of $p < .05$ as significant (Allison, 1999). Similarly, a Confidence Interval of 99 was considered as $p < .01$ as highly significant (Allison, 1999). Measures for the Pearson's correlation data and r^2 (Mason et al, 1999; Shane, 2007) were utilized and are described in Table 5-1. Measures for the F statistic (Snedecor & Cochran, 1980) were calculated using $df(3, 21)$ and are described in Table 5-2. Critical values for the t -test (Fisher & Yates, 1974) were determined using $df(24)$ and are found in Table 5-3.

Table 5-1
Strength of Correlation for Pearson's Correlation and r^2

Pearson's	Level of Significance
< .3	Weak statistical correlation
.4 - .6	Moderately strong statistical correlation
> .7	Strong statistical correlation

Table 5-2
Strength of F Statistic

F	Strength
> 3.07	Research hypothesis supported
> 4.87	Research hypothesis strongly supported

Table 5-3
Critical Value of t statistic

t	Interpretation
>1.711	Strong Evidence to Reject the Null Hypothesis
>2.485	Very Strong Evidence to Reject the Null Hypothesis

Findings

An OLS regression and means comparison testing were run on the data using SPSS with the following results. The various statistical data and decision point statistics are reported in Tables 5-4, 5-5, and 5-6.

Hypothesis One

H₁: Jurisdictions with higher levels of police residency have lower rates of Group A crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The number of police officers living in the complex who drove their cars home over a six month period, measured on an interval scale.

Dependent Variable

NIBRS Group A offenses reported to police, measured on a ratio scale by raw number divided by apartment units.

Table 5-4
Statistical Data for Dependent and Independent Variables and Decision Point Data for H₁

Statistic	Data	Finding
Pearson's Correlation	-.490	Moderately strong negative correlation
<i>p</i>	.006	Finding is highly significant
<i>F</i>	13.421	Research hypothesis strongly supported
<i>r</i> ²	.657	Moderately strong correlation
<i>t</i>	-3.0	Very strong evidence to reject null

In the case of H₁, there is strong support for a finding of a moderately strong negative correlation between police officer residency as evidenced by a take home police car and the Group A crime rate. The Pearson's correlation was -.490 with a *p* of .006 and an *F* of 13.421. The *r*² was .657, indicating a moderately strong fit for the model. With a *t* of -3.0, there was very strong evidence to reject the null and Group A crime was 21.95 percent lower when police

officers lived in the community, compared to when they did not. Considered in light of the Beta statistic for police residency within the model, residency has an important effect on Group A crime.

The null hypothesis, that police residency has no correlation to Group A crime, is rejected. The research hypothesis is strongly supported.

Hypothesis Two

H₂: Jurisdictions with higher levels of police residency have lower rates of Group B crimes than those with lower levels, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The number of police officers living in the complex who drove their cars home during a six month period, measured as an interval statistic.

Dependent Variable

NIBRS Group B offenses, measured as a ratio.

Table 5-5
Statistical Data for Dependent and Independent Variables and Decision Point Data for H₂

Statistic	Data	Finding
Pearson's Correlation	-.195	Weak negative correlation
<i>p</i>	.175	Finding is not significant
<i>F</i>	.237	Research hypothesis not supported
<i>r</i> ²	.179	Weak correlation
<i>t</i>	-3.967	Very strong evidence to reject null

Regarding H₂, there is a statistical outcome of a weak negative correlation between police officer residency and Group B crime rates, but the *p* indicates an unacceptable possibility that this finding could have been pure chance. The Pearson's correlation was -.195 with a *p* of .175 and an *F* of 1.528. The *r*² was .179, indicating that the model was a weak fit. Although the *t* was -3.967, Group B crime was 42.81 percent lower with police residency, and the Beta statistic for police residency indicated that this variable had a substantial effect within the model, the absence of other valid statistical evidence does not allow for a conclusion to be drawn from this data.

The null hypothesis, that police residency has no effect on Group B crime rates, is not rejected. The research hypothesis is not supported. A concern with this finding is that there was virtually no Group B crime recorded in the study area during the period observed.

Hypothesis Three

H₃: Jurisdictions with higher levels of police residency have lower levels of social disorganization, as measured by calls for police service, than those with lower levels of residency, as measured by a proxy variable of the apartment residency of police officers with take home cars.

Independent Variable

The number of police officers living in the complex who drove their cars home during a six month period, expressed as an interval.

Dependent Variable

Police calls for service at each apartment complex, measured as a ratio statistic, which is used as a proxy for evidence of social disorganization.

Table 5-6
Statistical Data for Dependent and Independent Variables and Decision Point Data for H₃

Statistic	Data	Finding
Pearson's Correlation	-.476	Moderately strong negative correlation
<i>p</i>	.008	Finding is highly significant
<i>F</i>	33.463	Research hypothesis strongly supported
<i>r</i> ²	.827	Strong correlation
<i>t</i>	-2.367	Strong evidence to reject null

As to H_3 , there is strong support for there being a moderately strong negative correlation between police residency and social disorganization, as proxied by police calls for service. The Pearson's correlation was $-.476$ with a p of $.008$ and an F of 33.463 . The r^2 of $.827$ indicated that the model was a strong fit and the Beta statistic for police residency within the model provides evidence that residency has an important effect on social disorganization. Further, police calls for service were 32.97 percent lower when a police officer lived in the apartment complex and the Paired Samples t was -2.367 , providing strong evidence to reject the null.

The null hypothesis, that police residency has no effect on social disorganization, is rejected. The research hypothesis is strongly supported.

Discussion of r^2

As noted above, the r^2 for both H_1 and H_3 were exceptionally high, higher than was expected or is common. The most likely explanation for this involves the location selected for the study. Only apartment complexes were used, for reasons explained in Chapter 3. Each of these communities were multi-family dwellings, meaning that no trailer parks or apartments over top of retail or offices were included in the sample. Further, most were located in areas surrounded by single-family residential areas. Only two of the sites were in a business area and these were located near each other.

These complexes were all located within a single jurisdiction. While the locality is large and diverse, the spread of incomes for people living in apartments was not as large as would be expected in an urban core city. The use of multi-family dwellings within a suburban ring county likely picked up a number of control variables that are known to affect crime rates. These variables include population density (Sampson, 2004), age (Blumstein, 2004; Wilson, J.Q.,

2004), mobility (Shane, 2007), employment (Bushway & Reuter, 2004), family disorganization (Sampson & Groves, 1989), and education (Farrington, 2004).

Other Correlations

Two control variables were used and they interacted with the independent and dependent variables, as well as with each other. Their Pearson's correlation statistics and *p* data are presented in Tables 5-6 and 5-7.

Income

Income was proxied using rent for apartments.

Table 5-7
Pearson's Correlation Statistics and *p* Data for Income

Variable	Pearson's	<i>p</i>	Significance
Group A Crime	-.700	.000	Strong negative correlation Highly significant finding
Group B Crime	-.400	.024	Moderately strong negative correlation Significant finding
Police Calls for Service	-.796	.000	Strong negative correlation Highly significant finding
Minority Population	-.598	.001	Moderately strong negative correlation Highly significant finding
Police Residency	.142	.249	Weak correlation Not a significant finding

The statistical data indicated that higher levels of income was correlated with lower levels of Group A crime, Group B crime, levels of social disorganization (as proxied by police calls for service), and minority population. These were not surprising findings as income has previously been shown to have an effect on crime rates (Tolan, 2004; Farrington, 2004).

The effect of income on police residency in a complex was not a statistically significant finding.

Minority Population

The statistic for the control variable involving minority population used the percentage of minorities in the apartment complex's census tract.

Table 5-8
Pearson's Correlation Statistics and *p* Data for Minority Population

Variable	Pearson's	<i>p</i>	Significance
Group A Crime	.562	.002	Moderately strong negative correlation Highly significant finding
Group B Crime	.267	.099	Weak negative correlation Not a significant finding
Police Calls for Service	.721	.000	Strong correlation Highly significant finding
Income	-.598	.001	Moderately strong negative correlation Highly significant finding
Police Residency	-.243	.120	Weak negative correlation Not a significant finding

The statistical data indicated that higher levels of minority population resulted in lower levels of income and higher levels of Group A crime and social disorganization, as proxied by police calls for service. These findings are not surprising, as it has previously been shown that minorities have lower incomes per capita (United States Census Bureau, 2007) and are the victims of crime at higher rates than average (Bureau of Justice Statistics, 2005). Race is a widely used variable in crime rate studies (Sampson, 2004).

The effect of minority population on Group B crime rates and police residency were not statistically significant findings.

Discussion and Recommendations

The study began by identifying a problem, that police and government officials have been split for two centuries on the value to the democratic policing model of police officer residency in the communities in which those officers serve. Most of the discussion of this issue has revolved around the opinions of leaders in the field of law enforcement, although some scientific inquiry occurred in the last several decades. This study reviewed the problem from the perspective of Routine Activities Theory and considered the impact of take home police cars as a place keeper for the police officer as capable guardians under that theory.

The research question was Does police residency impact the effectiveness in which police act as a capable guardian to the community under Routine Activities Theory?

The answer to this question is yes. There was significant evidence that the presence of police officers in residence at the studied apartment communities resulted in lower rates of Group A crime and social disorganization. As such, police officers are more capable guardians to the community when they live within those communities.

Recommendations for Further Research

As a number of states prohibit jurisdictions from mandating police residency and many others are subject to collective bargaining requirements, some research into the effect of incentives on voluntary police residency rates and patterns would be of use. As an example, in the subject jurisdiction, the police department permits only those officers who live within the locality to use a take home vehicle. All other cars must be left at a police facility when the officer is done working and their personal car is used for transport to and from work. While the precise benefit to each individual officer is unknown, there is certainly some monetary value to using someone else's car and gasoline to get back and forth to work. Other incentives, such as extra points on promotional processes, higher salaries, additional leave, or low cost mortgages could be useful in encouraging residency. Since there are political, collective bargaining, and state legal requirements that may be involved in police residency issues, it is important that policy makers be able to consider methods to incentivize the process rather than simply mandating residency.

A second issue for further study would be the difference in effect between officers in residency that have take home cars and those who do not. While this paper studied the more obvious effects of whether police officers using the place keeping ability of the marked police car at home impacted crime and social disorganization, it involved those locations with police with take home cars and those without police officers living there, but not those in which police officers lived there without a marked vehicle.

Another area for potential study would be the effect of police officers who live in a community, but are not members of the primary law enforcement agency for that jurisdiction.

A final area for further research would involve the effect of police residency on the frequency of repeated call for service from the same address. Excluding intersections and government

buildings, calls for service data from the Chesterfield Police Department indicated that during the six-month study period just 614 addresses accounted for 15,872 calls. This was 24.4% of the 64,968 calls the police department responded to during this time. While a number of the addresses were commercial businesses, many were residential locations. Multiple responses to the same address results in a significant use of police resources. A study designed to determine the effect of police residency requirements on repeated calls for service at the same address could have significant potential to assist public policy makers.

Conclusion

This study considered the effectiveness of police residency requirements, an old question, in light of the Routine Activities Theory, a concept that has not previously been used in this discussion. It sought to determine whether police officers are a more capable guardian to their communities if they live within the jurisdiction. Using the presence of marked take home police cars as place keepers for the officers, the research centered on apartment complexes as proxies for localities and compared Group A crime rates, Group B crime rates, and police calls for service as evidence of social disorganization. Utilizing a sound methodology and data collection practices, it was determined that police residency impacts Group A crime and social disorganization. It was found that police officers are more capable guardians when they reside in their jurisdictions.

List of References

List of References

- Allison, P.D. (1999). *Multiple regression: A primer*. Thousand Oaks, CA: Pine Forge Press.
- American Civil Liberties Union of Southern California. (1994). *From the outside in: Residency patterns within the Los Angeles Police Department*. Los Angeles: American Civil Liberties Union.
- American Police Beat. (2007, January). *Some officers can't afford to live where they work*. In American Police Beat, January 2007, p. 57.
- The Apartment Guide. (2007, December). *The apartment guide online*. Obtained from www.apartmentguide.com/propertyoverview.aspx on March 26, 2008.
- Aston, T.S. (1997). *The industrial revolution, 1760-1830*. Oxford: Oxford University Press.
- Baldassare, M. (1994). *The Los Angeles riots: Lessons for the urban future*. Boulder, CO: Westview Press.
- Barnes, T. (2005, May 3). Senate to vote on eliminating police residency requirement. In Pittsburgh Post-Gazette.
- Blumstein, A. (2004). Prisons: A policy challenge. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Bouza, A.V. (1978). *Police administration: Organization and performance*. New York: Pergamon Press.

- Bratton, W. (1998). *Turnaround: How America's top cop reversed the crime epidemic*. New York: Random House.
- Bratton, W. (2007). Foreward. In Shane, J.M. *What every chief executive should know: Using data to measure police performance*. Flushing, NY: Looseleaf Law Publications.
- Brockton Police Assn. v. City of Brockton*. (2003). 57 Mass.App.Ct. 671.
- Bureau of Justice Statistics. (2005). *Victim characteristics*. Obtained from http://www.ojp.usdoj.gov/bjs/cvict_v.htm#race on February 22, 2007.
- Bursik, Jr., R.J. (1998). Social disorganization and theories of crime and delinquency: Problems and prospects. In Henry, S., Einstadter, W. (eds) *The criminology theory reader*. New York: New York University Press.
- Bushway, S., Reuter, P. (2004). Labor markets and crime. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Calhoun, J.A., O'Neil, J.F. (2003). Preventing crime, reducing fear, and building community. In Geller, W.A., Stephens, D.W. (eds.), *Local government police management* (4th ed). Washington, DC: International City/County Management Association.
- Cannon, L. (1997). *Official negligence: How Rodney King and the riots changed Los Angeles and the LAPD*. Los Angeles: Times Books.
- Carte, G.E. (1973). Public attitudes towards the police. In *Journal of police science and administration*. 1, 182-200.
- Carte, G.E., Carte, E.H. (1975). Police reform in the United States: The era of August Vollmer, 1905-1932. Los Angeles: University of California Press.

- Chambers, B. (2007, January 13). Judge rules against residency requirement. In *Huntington Herald-Dispatch*.
- Chase, A. (1979). Residency laws – Should police be free to live where they choose. In *Police*, 2, 1, pp. 62-65.
- Chesterfield County, Virginia, Government. (2007). *Demographic information*. Obtained from www.co.chesterfield.va.us/communitydevelopment/planning/demog.asp on February 22, 2007
- Christopher Commission. (1991). *Report of the independent commission on the Los Angeles Police Department*. Los Angeles: City of Los Angeles.
- Clarke, R.V., Felson, M. (1993). *Routine activity and rational choice*. London: Transaction Publishers.
- Coleman, S.F. (1983). The dilemmas of police residency: Views from the street. In *Journal of police science and administration*. 11, pp. 194-199.
- Commonwealth of Virginia. (2007). Code section 2.2-3706. *Disclosure of criminal records; limitations*.
- Commonwealth of Virginia. (2007). Code section 9.1-600. *Civilian protection in cases of police misconduct; minimum standards*.
- Commonwealth of Virginia. (2007). Title 15.2, Chapter 5. *County Executive Form of Government*.
- Commonwealth of Virginia. (2007). Code section 15.2-720.1. *Employee benefits; residence in county*.
- Commonwealth of Virginia. (2007). Code section 15.2-1525. *Where officers shall reside*.

- Cornish, D.B., Clarke, R.V. (1998). Understanding crime displacement: An application of rational choice theory. In Henry, S., Einstadter, W. (eds) *The criminology theory reader*. New York: New York University Press.
- Farrington, D.P. (2004). Families and crime. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Fedanzo v. City of Chicago*. (2002). 2002 Ill.App. 413
- Felson, M. (1998). Routine activities and crime prevention in the developing metropolis. In Henry, S., Einstadter, W. (eds) *The criminology theory reader*. New York: New York University Press.
- Fisher, R.A., Yates, F. (1974). *Statistical tables for biological, agricultural, and medical research*. In Kachigan, S.K. (1991). *Multivariate statistical analysis: A conceptual introduction*. (2nd ed) New York: Radius Press.
- Fogelson, R.M. (1977). *Big city police: An urban institute study*. Cambridge, MA: Harvard University Press.
- Frankfort-Nachmias, C., Nachmias, D. (2000). *Research methods in the social sciences*. (6th ed) New York: Worth Publishers.
- Garner, B.A. (ed.) (1999). *Black's law dictionary*. St. Paul, MN: West Group.
- Gomez, H.J. (2009, June 10). Ohio Supreme Court rules against city residency requirements. In *The Cleveland Plain Dealer*.
- Gonzalez, R.A., Mehay, S.L., Duffy-Deno, K. (1991). Municipal residency laws: Effects on police employment, compensation, and productivity. In *Journal of labor research*. 12, pp. 439-452.

- Greenberg, J., Baron, R.A. (2003). *Behavior in organizations: Understanding and managing the human side of work*. (8th ed). Upper saddle River, NJ: Prentice Hall.
- Greenwood, P.W. (2004). Juvenile crime and juvenile justice. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Harrigan, J.J. (1981). *Political change in the metropolis*. Boston: Little, Brown, and Co.
- Harvey, D., Brown, D.R. (1996). *An experiential approach to organization development*. (5th ed.) Upper Saddle River, NJ: Prentice Hall.
- Hess, K.M., Wroblewski, H.M. (2004). *Police operations: Theory and practice*. (4th ed.) Belmont, CA: Thomson Wadsworth.
- Hewitt, W.H. (1965). *British police administration*. (2nd ed) Springfield, IL: Charles C Thomas.
- Hickman, M.J., Reaves, B.A. (2006). *Local police departments, 2003*. Washington, D.C.: Bureau of Justice Statistics.
- Hicks, J.P. (1992, October 8). Mayor hopes he can draw police to city. In *New York Times*.
- Hirsh, W., Rufalo, A. (1985). Economic effects of residency laws on municipal police. In *Journal of urban economics*. 17, pp. 335-348.
- Huch, R.K. (2002). The rise of democracy in Britain, 1830-1918. (book review re Malchin, I., 2002, New York: Palgrave). In *Albion*, 34, pp. 336-337.
- International Association of Chiefs of Police. (2007). *Take home cruisers: Issues for consideration*. Obtained February 22, 2007 from www.iacp.org/documents/pdfs/rcd/take-homecruisers.pdf
- Int. Assn. of Firefighters v. Napolitano*. (1986). 516 A.2d. 1347

- Isaac, S., Michael, W.B. (1997). *Handbook in research and evaluation*. (3rd ed). San Diego, CA: Educational and Industrial Testing Services.
- Ivancevich, J.M., Matteson, M.T. (1999). *Organizational behavior and management*. (5th ed) Boston: McGraw-Hill.
- Johnson, K. (2006, October 2). Police, firefights challenge residency rules. In *USA Today*.
- Jones, S. (2006). *Criminology*. (3rd ed.) Oxford, UK: Oxford University Press.
- Kachigan, S.K. (1991). *Multivariate statistical analysis: A conceptual introduction*. (2nd ed.) New York: Radius Press.
- Kelling, G.L. (2003). The evolution of contemporary policing. In Geller, W.A., Stephens, D.W. (eds.), *Local government police management* (4th ed). Washington, DC: International City/County Management Association.
- Lalumia, C. (2001). Scrooge and Albert: Christmas in the 1840s. In *History Today*, 51, 12, pp. 23-30.
- Lardner, J., Reppetto, T. (2000). *NYPD: A city and its police*. New York: Henry Holt and Company.
- Lauria, D.T. (2007). Cost-benefit analysis of Tacoma's assigned vehicle program. In *Police quarterly*, 10, pp.192-217.
- Levenson, J.A. (1976). *There's no place like home: A police union's struggle against the residency requirement in Detroit*. (Master's thesis, Massachusetts Institute of Technology, 1976). Obtained from <http://dspace.mit.edu/bitstream/1721.1/32120/1/03013539.pdf> on February 2, 2007.
- Leonard, V.A., More, H.W. (1974). *Police organization and management*. (4th ed) Mineola, NY: The Foundation Press.

- Levitt, S.D. (2004). Deterrence. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Lima v. State*. (2009). 122 Ohio St.3d 155, 2009-Ohio-2597.
- Mandish, J.R., Frankel, L.S. (1976). Personnel practices in the municipal police service. *Urban data service report*. 8.
- Mann, B., Goodman, D.E. (2004). Take-home cars. In *Police Fleet Magazine*, 8.
- Mason, R.D., Lind, D.A., Marchal, W.G. (1999). *Statistical techniques in business and economics*. (10th ed) New York: Irwin McGraw-Hill.
- Maxfield, M.G., Babbie, E. (2004). *Research methods for criminal justice and criminology*. Belmont, CA: Thomson Wadsworth Learning.
- McCarthy v. Philadelphia civil service commission*. (1976). 75 S.Ct. 783
- Mehay, S.L., Seiden, K.P. (1986). Municipal residency laws and local public budgets. In *Public choice*. 48, pp 27-35.
- Miller, W.R. (1977) *Cops and bobbies: Police authority in New York and London, 1830-1870*. Chicago: University of Chicago Press.
- Mollen Commission. (1994). *The City of New York commission to investigate allegations of police corruption and the anti-corruption procedures of the police department*. New York: City of New York.
- Moore, D.S. (1995). *The basic practice of statistics*. New York: W.H. Freeman and Company.
- Morgan v. City of Wheeling*. (1993). 516 S.E.2d. 48
- Murphy, D.W., Worrall, J.L. (1999). Residency requirements and public perceptions of the police in large municipalities. In *Policing: An international journal of police strategies and management*. 22, pp. 327-342.

- National Association for the Advancement of Colored People. (1995). *Beyond the Rodney King story: An investigation of police conduct in minority communities*. Boston: Northeastern University.
- National Black Police Association. (2007). *Positions of the National Black Police Association*. Obtained from www.blackpolice.org/membership.html on February 22, 2007.
- Neiderhoffer, A. (1967). *Behind the shield: The police in urban society*. Garden City, NY: Doubleday.
- National Institute of Justice. (2005) *Hiring and keeping police officers*. Rockville, MD: National Criminal Justice Research Service.
- Nowicki, D.E., Punch, M.E. (2003). Fostering integrity and professional standards. In Geller, W.A., Stephens, D.W. (eds.), *Local government police management* (4th ed). Washington, DC: International City/County Management Association.
- O'Brien, K.M. (1997). Do municipal residency laws affect labor market outcomes. In *Urban studies*. 34, pp. 1759-1769.
- Olesky, W. (1996). A cop next door. In *Policy review*. 76, pp. 8-10.
- Petersilia, J. (2000). Racial disparities in the criminal justice system. In Hancock, B.W., Sharp, P.M. (eds). *Public policy, crime, and criminal justice*. (2nd ed) Upper Saddle River, NJ: Prentice Hall.
- Pfefferkorn, R.G., Bruckheim, A.J. (1974). *Increasing police productivity – A study of patrol cars, communication and operations*. Washington, DC: National Institute of Justice Publications.
- Rhyne, C.S. (1982). *Police and fire fighters law: The law of municipal personnel regulation*. Washington, DC: Law of local government project.

- Rhyne, C.S., Rhyne, W.S., Elmendorf, S.P. (1977). *The constitutionality of residency requirements for municipal officials and employees*. Washington, DC: National Institute of Municipal Law Officers.
- Richter, A. (2007, January 28). Matching the police to the populace. In *The New York Times*.
- Robins, S.P. (1997). *Essentials of organizational behavior*. (5th ed) Upper Saddle River, NJ: Prentice Hall.
- Sampson, R.J. (2004). The community. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Sampson, R.J., Groves, W.B. (1989). Community structure and crime: Testing social disorganization theory. In *American journal of sociology*, 94, pp. 774-802.
- Schmechel, J.D. (2004). Take-home squad car program. In *Police Fleet Magazine*, 8.
- Schuldt, G. (2001, October 4). Judge overturns police panel in officer's residency case. In *Milwaukee Journal Sentinel*.
- Seabrook Police Assn. v. Town of Seabrook*. (1993). 635 A.2d. 1371
- Shane, J.M. (2007). *What every chief executive should know: Using data to measure police performance*. Flushing, NY: Looseleaf Law Publications.
- Shapiro v. Thompson*. (1969). 394 US 618
- Skolnick, J.H., Bayley, D.H. (1986). *The new blue line: Police innovation in six American cities*. New York: The Free Press.
- Skolnick, J.H., Fyfe, J.J. (1993). *Above the law: Police and the excessive use of force*. New York: The Free Press.
- Skogan, W. (1996). The police and public opinion in Britain. In *American behavioral scientist*. 39, pp. 421-432.

- Smith, D.A., Visher, C.A. (1981). Street-level justice: Situational determinants of police arrest decisions. In *Social problems*. 29, pp. 167-177.
- Smith, D.C. (1980). Police attitudes and performance: The impact of residency. In *Urban affairs quarterly*. 15, pp. 317-334.
- Snedecor, G.W., Cochran, W.G. (1980). Critical values of *F*. In Frankfort-Nachmias, C., Nachmias, D. (2000). *Research methods in the social sciences*. (6th ed) New York: Worth Publishers.
- Spielman, F. (2010, March 26). Daley rips decision to let teachers to live outside city. In *Chicago Sun-Times*.
- St Louis University School of Law. (1973). Municipal police residency restrictions – remnant of feudalism or sound public policy. In *St Louis University law journal*. 18, pp. 214-234.
- State of Missouri. (2003). *SR 0919 – Create an interim committee on police officer residency requirements for political subdivisions*.
- Sullivan, L. (2010, March 30). 9 percent of city employees move after restriction lifted. In *Dayton Daily News*.
- Swank, C.J., Conser, J.A. (1983). *The police personnel system*. New York: John Wiley and Sons.
- Taylor, R.B. (2004). Physical environment. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Texas Civil Rights Project. (2005). *TCRP director joins call for police residency*. Obtained from www.texascivilrightsproject.org/newspub/pr_050821_support_police_residency.html on February 22, 2007.

- Thibault, E.A., Lynch, L.M., McBride, R.B. (2001). *Proactive police management*. (5th ed) Upper Saddle River, NJ: Prentice Hall.
- Tierney, K.J. (1994). Property damage and violence: A collective behavior analysis. In Baldassare, M. (ed) *The Los Angeles riots: Lessons for the urban future*. Boulder, CO: Westview Press.
- Tolan, P. (2004). Crime prevention: Focus on youth. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Trager v. Kampe*. (2003). 2003 N.Y. Int. 0021
- United States Census Bureau. (2007). *Money income of families—Median income by race and Hispanic origin in current and constant (2007) dollars: 1990 to 2007*. Obtained from <http://www.census.gov/compendia/statab/2010/tables/10s0681.pdf> on January 24, 2010.
- United States Census Bureau. (2008). *Census 2000 summary file*. Obtained from <http://factfinder.census.gov> on June 13, 2008.
- U.S. President's Commission on Law Enforcement and Administration of Justice. (1967). *Role of the police*. Washington, DC: United States Government.
- Vollmer, A. (1936). *The police and modern society*. Montclair, NJ: Patterson Smith.
- Warner, B.D., Pierce, G.L. (1993). *Reexamining social disorganization theory using calls to police as a measure of crime*. In *Criminology*. 31, pp. 493-517.
- Wilds, M. (2007, January 29). Police panel adopts residency restrictions. In *Chicago Times*.
- Wilson, J.M. (2006). *Community policing in America*. New York: Taylor and Francis Group.
- Wilson, J.Q. (1968). The police and delinquents in two cities. In Wilson, J.Q. (ed) *City politics and public policy*. New York: John Wiley.

- Wilson, J.Q. (2004). Crime and public policy. In Wilson, J.Q., Petersilia, J. (eds) *Crime: Public policies for crime control*. Oakland, CA: ICS Press.
- Wilson, O.W. (1950). *Police administration*. New York: McGraw-Hill.
- Wilson, O.W. (1963). *Police administration*. (2nd ed). New York: McGraw-Hill.
- Wilson, O.W. (1952). *Police planning*. Springfield, IL: Thomas.
- Wilson, O.W., McLaren, R.C. (1972). *Police administration*. (3rd ed) New York: McGraw-Hill.
- Wilson, O.W., McLaren, R.C. (1977). *Police administration*. (4th ed) New York: McGraw-Hill.
- Zhang, S.X., Benson, T.D. (1997). Cost-effectiveness and officer morale of a personally assigned patrol vehicle program: A comparative analysis. In *Policing: An international journal of police strategies & management*, 20, pp. 749-765.

Appendixes

Appendix A

Data

Complex	Size	Rent	Minority %	Police Residency	Group A Crime Rate	Group B Crime Rate	Police Calls
A	288	\$940	.191	0	.035	.000	.108
B	232	\$865	.212	4	.000	.000	.017
C	296	\$969	.169	3	.020	.000	.027
D	286	\$945	.433	0	.092	.000	.120
E	721	\$569	.621	0	.135	.013	.287
F	140	\$945	.133	1	.021	.000	.057
G	278	\$691	.573	0	.152	.000	.259
H	210	\$750	.334	0	.148	.01	.252
I	312	\$795	.120	4	.022	.000	.103
J	214	\$739	.011	0	.188	.000	.154
K	152	\$820	.371	2	.072	.007	.132
L	312	\$1040	.127	2	.013	.000	.006
M	240	\$989	.011	0	.032	.000	.057
N	296	\$750	.122	4	.007	.000	.020
O	320	\$849	.127	2	.028	.000	.119
P	477	\$665	.362	0	.154	.000	.208
Q	128	\$800	.244	0	.070	.008	.219
R	360	\$810	.190	0	.069	.003	.164
S	240	\$919	.168	0	.084	.000	.081
T	132	\$895	.213	0	.076	.000	.122
U	300	\$915	.124	4	.023	.007	.060
V	229	\$719	.244	0	.104	.004	.228
W	651	\$655	.573	0	.170	.000	.310
X	265	\$834	.168	14	.030	.000	.057
Y	190	\$780	.096	0	.104	.011	.152

Table Legend follows on next page

Table Legend

Complex = Apartment complex coding

Size = Number of units

Rent = Monthly rent per 1-bedroom unit

Minority % = Census tract minority percentage

Police Residency = Police officers residing in the complex

Group A Crime Rate = Group A crimes as a ratio per unit

Group B Crime Rate = Group B crimes as a ratio per unit

Police Calls = Police calls for service as a ratio per unit

Appendix B

SPSS Output for Means Testing

Report

Total Group A

DummyRes	Mean	N	Std. Deviation
.00	.10753	15	.048240
1.00	.02360	10	.019352
Total	.07396	25	.057089

Report

Total Group B

DummyRes	Mean	N	Std. Deviation
.00	.00327	15	.004773
1.00	.00140	10	.002951
Total	.00252	25	.004175

Report

Total Calls

DummyRes	Mean	N	Std. Deviation
.00	.18140	15	.077066
1.00	.05980	10	.044703
Total	.13276	25	.088941

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Total Group A - DummyRes	-.326040	.543347	.108669	-.550323	-.101757	-3.000	24	.006
Pair 2	Total Group B - DummyRes	-.397480	.500950	.100190	-.604262	-.190698	-3.967	24	.001
Pair 3	Total Calls - DummyRes	-.267240	.564545	.112909	-.500273	-.034207	-2.367	24	.026

Appendix C

SPSS Output for Hypothesis 1

Correlations					
		Total Group A	Rent per Unit	Census Tract Minority %	Police Residency
Pearson Correlation	Total Group A	1.000	-.700	.562	-.490
	Rent per Unit	-.700	1.000	-.589	.142
	Census Tract Minority %	.562	-.589	1.000	-.243
	Police Residency	-.490	.142	-.243	1.000
Sig. (1-tailed)	Total Group A	.	.000	.002	.006
	Rent per Unit	.000	.	.001	.249
	Census Tract Minority %	.002	.001	.	.120
	Police Residency	.006	.249	.120	.
N	Total Group A	25	25	25	25
	Rent per Unit	25	25	25	25
	Census Tract Minority %	25	25	25	25
	Police Residency	25	25	25	25

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.811 ^a	.657	.608	.035732	.657	13.421	3	21	.000

a. Predictors: (Constant), Police Residency, Rent per Unit, Census Tract Minority %

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.301	.072		4.162	.000
	Rent per Unit	.000	.000	-.566	-3.579	.002
	Census Tract Minority %	.047	.055	.136	.845	.407
	Police Residency	-.007	.002	-.376	-2.857	.009

a. Dependent Variable: Total Group A

Appendix D

SPSS Output for Hypothesis 2

Correlations					
		Total Group B	Rent per Unit	Census Tract Minority %	Police Residency
Pearson Correlation	Total Group B	1.000	-.400	.267	-.195
	Rent per Unit	-.400	1.000	-.589	.142
	Census Tract Minority %	.267	-.589	1.000	-.243
	Police Residency	-.195	.142	-.243	1.000
Sig. (1-tailed)	Total Group B	.	.024	.099	.175
	Rent per Unit	.024	.	.001	.249
	Census Tract Minority %	.099	.001	.	.120
	Police Residency	.175	.249	.120	.
N	Total Group B	25	25	25	25
	Rent per Unit	25	25	25	25
	Census Tract Minority %	25	25	25	25
	Police Residency	25	25	25	25

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.423 ^a	.179	.062	.004043	.179	1.528	3	21	.237

a. Predictors: (Constant), Police Residency, Rent per Unit, Census Tract Minority %

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.008		1.664	.111
	Rent per Unit	-1.319E-5	.000	-.371	-1.518	.144
	Census Tract Minority %	.000	.006	.014	.057	.955
	Police Residency	.000	.000	-.138	-.679	.504

a. Dependent Variable: Total Group B

Appendix E

SPSS Output for Hypothesis 3

Correlations					
		Total Calls	Rent per Unit	Census Tract Minority %	Police Residency
Pearson Correlation	Total Calls	1.000	-.796	.721	-.476
	Rent per Unit	-.796	1.000	-.589	.142
	Census Tract Minority %	.721	-.589	1.000	-.243
	Police Residency	-.476	.142	-.243	1.000
Sig. (1-tailed)	Total Calls	.	.000	.000	.008
	Rent per Unit	.000	.	.001	.249
	Census Tract Minority %	.000	.001	.	.120
	Police Residency	.008	.249	.120	.
N	Total Calls	25	25	25	25
	Rent per Unit	25	25	25	25
	Census Tract Minority %	25	25	25	25
	Police Residency	25	25	25	25

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.909 ^a	.827	.802	.039548	.827	33.463	3	21	.000

a. Predictors: (Constant), Police Residency, Rent per Unit, Census Tract Minority %

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.465	.080		5.803	.000
	Rent per Unit	.000	.000	-.570	-5.070	.000
	Census Tract Minority %	.163	.061	.307	2.678	.014
	Police Residency	-.009	.003	-.320	-3.419	.003

a. Dependent Variable: Total Calls

Appendix F

SPSS Output for Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Rent per Unit	25	\$569	\$1,040	\$825.92	\$117.549
Census Tract Minority %	25	.011	.621	.23748	.167226
Police Residency	25	0	14	1.60	3.014
Total Group A	25	.000	.188	.07396	.057089
Total Group B	25	.000	.013	.00252	.004175
Total Calls	25	.006	.310	.13276	.088941
Valid N (listwise)	25				

Vita

David John Pritchard was born on January 14, 1969, in the Northridge section of Los Angeles, California, and is a citizen of the United States. He graduated from Bryant Avenue Baptist School in Minneapolis, Minnesota, in 1987. He received an Associate of Applied Science in Law Enforcement with honors from Central Texas College in 1991 and a Bachelor of Science in Organizational Management and Development magna cum laude from Bluefield College in 1999. He received a Master of Science in Public Administration from Central Michigan University in 2001.

David has served as an adjunct professor at Virginia Commonwealth University since 2005, teaching graduate and undergraduate courses in policing theory and practice, justice policy and administration, and criminal procedure.

David served in the United States Army Reserve from 1986-1987 and the United States Army from 1987-1991, taking basic and advanced training at Fort Dix, New Jersey, and Fort Jackson, South Carolina. He was posted at Fort Snelling, Minnesota; Fort Richardson, Alaska; Frankfurt in the former West Germany; and Fort Lee, Virginia. He was awarded the Army Commendation Medal, Army Achievement Medal (3rd Award), Good Conduct Medal, and National Defense Service Medal and received an honorable discharge.

David has been employed by the Chesterfield Police Department in Chesterfield, Virginia, since 1991 and currently holds the rank of captain. He has served as a patrol officer, community

policing officer, crimes against juvenile detective, sergeant, and lieutenant. His supervisory and command experience includes assignments in patrol, crimes against persons, major case, community support, and special operations. He has performed ancillary duties as a hostage negotiator, field training officer, associate advisor to the police explorer post, and academy instructor, teaching basic, inservice, and regional training. He has received a chief's commendation for heroism, as well as three chief's commendations, two achievement awards, and a U.S. Attorney's Office certificate of merit for exceptional performance in homicide and robbery investigations and two unit citations for exceptional duty performance while in leadership positions.

David is a graduate of the 238th Session of the FBI National Academy.